EASTERN ARCTIC STUDY
CASE STUDY SERIES:
THE NANISIVIK MINE

by

Margot J. Wojciechowski

EASTERN ARCTIC STUDY
April 1982

ACKNOWLEDGEMENTS

It would have been impossible to obtain the background material and documentation necessary for this case study without the assistance and goodwill of a great many people. I would like to express my appreciation to residents of Arctic Bay, Pond Inlet and Nanisivik who took time to help, as well as to individuals in Strathcona Mineral Services, Nanisivik Mines Limited, the Government of the Northwest Territories, the Government of Canada, the Inuit Tapirisat of Canada, the Baffin Regional Council, and others who offered their time and attention.

I would particularly like to acknowledge the many contributions of C. George Miller to the preparation of this case study. Dr. Miller was involved in the background research from the earliest stages, participated in interviews in the south and in the north, helped with the interpretation and analysis, wrote parts of the first draft, and made valuable suggestions for the later versions.

MJW

FOREWORD

The Eastern Arctic Study is a joint project of the Institute of Local Government and the Centre for Resource Studies, both at Queen's University in Kingston. Funding for the study has been provided by the Donner Canadian Foundation.

This paper is one of a series of case studies that has been prepared as background material for the Eastern Arctic Study, and which will be used to develop scenarios for possible future developments in constitutional change, land claims settlements, local government, and the regulation of mineral development within the claim area of the Inuit Tapirisat of Canada. The opinions expressed are those of the author, and do not necessarily represent the views of the Donner Foundation, or of the Institute of Local Government or the Centre for Resource Studies or their sponsors.

Margot J. Wojciechowski
Centre for Resource Studies

SUMMARY

The Nanisivik mine is a small lead/zinc producer located at the northern tip of Baffin Island. Its work force of about 200 is almost 25 percent Inuit. The Inuit workers, along with employees recruited in the south, live at the mine site in a planned community. The mine began production in 1977, and is expected to be in production for another 5 or 6 years.

A number of aspects of the planning, operation, and regulation of the project have been controversial. This study looks at those issues related to the Nanisivik mine that will help in understanding the needs of all parties involved in local government and the regulation of resource development in the ITC claim area.

The Relevant Issues

i Community participation in the planning process
Arctic Bay is the closest community to the Nanisivik mine, and is linked to it by a road. The community was visited by company representatives frequently during the planning stage and kept informed of progress. GNWT officials visited occasionally, and federal officials even less often, in spite of the fact that DIAND played the major planning role. The community feels that it was never asked for information or advice by the government planners, and that its views and needs were not adequately taken into consideration. Other communities in the Baffin were even less involved in the planning.

ii Participation in planning and monitoring
Planning for Nanisivik was a joint effort of the company's consultants and the Interdepartmental Working Groups. Monitoring has been the task of interdepartmental monitoring committees, which have no sanctions to ensure that original plans are being carried out as agreed. Except for the company, no nongovernmental agencies or interests have been involved.

iii Social impact on Arctic Bay
Early concerns about the potential for harmful social effects on Arctic Bay have in general not been realized. A major factor in this regard was the decision to build a separate townsite, which has insulated Arctic Bay somewhat from southern influences. The company's policy of restricting alcohol and of restricting access to Arctic Bay has also helped.

iv Employment and training
The original goal of 60 percent Inuit employees has never been realized or even approached. However, there is a growing realization that the 20 to 25-percent level actually reached is reasonable. Although the training program for Inuit workers started slowly, considerable progress has been made since 1981. The mine has provided employment experience and income for a significant number of north Baffin residents.

v Economic spinoffs
The potential for economic spinoff benefits for northern residents from the Nanisivik development may have been constrained by the creation of a dedicated townsite and by some company policies.

vi Environmental issues
The major environmental issue related to Nanisivik was the disposal of mine tailings. A secondary issue is the disposal of sewage. Both are complicated by the lack of environmental baseline data for the region to provide a basis for evaluation.

vii Nanisivik as a pilot project
A recent evaluation has reported that most of the government's original goals for the development have been achieved. There have been advances in technology and economic benefits to the Baffin region, with few negative environmental or social effects.

viii The use of monitoring committees
The monitoring committees have provided a means of intragovernmental communication. They do not, however, appear to be a useful means of ensuring compliance with terms and conditions of agreements.

ix Government equity participation
The federal government demanded an equity share in the project because of its large infrastructure commitment. The experience has provided some useful insights into the value of equity participation as a means to controlling or regulating development.

Lessons of Nanisivik for the Eastern Arctic Study

i Identification of affected communities
Communities that will be affected by resource developments should be identified early in the planning stage so they can be consulted. Further, they

should be categorized by type of impact that can be expected (e.g. social, economic, environmental), and consulted specifically on those issues.

ii Identifying the role of the community
It should be made absolutely clear to the community whether its role in any particular consultation process involves receiving information, giving information, giving advice and opinions, real influence in decisions, or any combination of these.

iii Communities and utilities
Northern communities are totally dependent on the federal and territorial government for the provision of a broad range of local services, but their control over the quality is very limited. Some means of increasing community control over these areas should be considered, particularly when externally-imposed resource developments lead to pressures on and expansion of such services.

iv Community options for resource development
Past experiences can help with future decisions by providing in-depth information on communities that have followed different paths of involvement in resource development. These options can include: controlled access between established and new communities (e.g. Arctic Bay and Nanisivik); the creation of a new community (e.g. Nanisivik); or expansion of an existing community (e.g. Rankin Inlet). It is hoped that, in future, communities will be able to learn from these experiences when making their own choices.

v Information needs
The lack of social and environmental baseline data has handicapped attempts to monitor and evaluate the operations of Nanisivik. Resource planning should include planning for adequate and reliable baseline data, as well as on-going studies to facilitate evaluation.

vi Employment and training of northerners
Employment and on-the-job training of northerners appears to be constrained by a number of factors that must be dealt with if northerners are to compete successfully for jobs. Among these factors are: the problems associated with leaving the home community to finish high school or to take apprenticeship training, and southern teaching techniques which may not be the most appropriate for Inuit students.

Conclusion

Neither the worst fears of social disruption nor the highest hopes for economic benefits from the Nanisivik development have been realized. However, the project has been relatively successful, making significant economic contributions to the north Baffin region while causing minimal social and environmental disruption.

CONTENTS

Acknowledgements / ii

Foreword / iii

Summary / iv

1 Introduction / 1

2 Overview / 6
- Introduction to Nanisivik / 6
- Development of Nanisivik / 7
- Summary of Issues Raised in the Nanisivik Study / 12
- Relevance of Issues to the Eastern Arctic Study /16

3 Nanisivik Issues Relevant to the Eastern Arctic Study / 17
- Community Consultation in the Planning Process / 17
- Other-Agency Participation in the Planning Process / 20
- Participation in the Monitoring Process / 22
- Social Impact on Arctic Bay / 25
- Employment and Training / 27
- Economic Spinoffs for Northerners / 30
- Environmental Issues / 32
- Nanisivik as a Pilot Project / 33

4 Lessons of Nanisivik for the Eastern Arctic Study / 36
- Community Participation in Planning and Regulation / 36
- Community Options for Resource Development / 37
- Information Needs for Planning and Regulation / 40
- Employment and Training of Northerners / 42
- Direct Government Participation / 43

5 Conclusion: Nanisivik in the EAS Context / 46

Table 1. Eastern Arctic Study Major Case Studies / 2
Table 2. Nanisivik Mine Production, 1976-80 / 6

Figure 1. Map of Northwest Territories / 3
Figure 2. Corporate Structure of Nanisivik Mines Ltd. / 9
Figure 3. Nanisivik Monitoring Committee / 23

Appendix I: Chronology of Nanisivik Development / 46
Appendix II: List of Acronyms / 53
Appendix III: Nanisivik Interviews / 54
Appendix IV: Bibliography / 55

The Author / 57

The Centre for Resource Studies / 58

The Institute of Local Government / 59

Eastern Arctic Study / 60

EAS Publications / 62

1. INTRODUCTION

The overall objective of the Eastern Arctic Study is to examine the implications of constitutional development and of land claims for local government and for mineral development in one particular land claim area, that of the Inuit Tapirisat of Canada (ITC). An integral part of Eastern Arctic Study research is a series of case studies. The basic purpose of these is to examine specific instances of past industry/community/government interaction concerning industrial development.

Three types of case studies have been prepared. The first consists of three examples of interaction occurring within ITC's claim area. The second deals with interactions in the Beaufort Sea oil and gas development, which is within the Northwest Territories but outside the ITC claim area. The final pair of case studies concerns the industrial development regimes established in two jurisdictions which have already settled native land claims. By studying these existing claim settlements, even in different political jurisdictions, it is possible to identify strength and weaknesses of particular approaches. Accordingly, the James Bay settlement in Quebec (both Inuit and Cree settlements) and the settlement between the native peoples of Alaska and the United States and Alaskan State governments have been examined. These two cases are supplementary, designed to provide an overview of the particular claims settlement involved and its apparent effects on the interaction between communities and industrial developers in each case.

Four possibilities were considered when selecting cases for study within the ITC claim area and elsewhere within the Northwest Territories. These were:

i cases involving communities with a long history of industrial development activity;
ii cases involving communities with a recent history of industrial activity (e.g. only one major involvement);
iii cases involving communities with a long history of industrial development but which have also experienced a pull-out by industry;
iv cases involving communities where industrial development activity is anticipated in the near future.

Other factors entered into the selection process. For example, it was thought to be worthwhile to investigate any differences between the community relations of oil and/or gas companies as compared with those of firms involved in mineral exploration or development. Furthermore, differences in company/community

interaction related to exploration activities as opposed to development activities were also thought to be worth considering.

After consultation with the Eastern Arctic Study Advisory Committee, it was decided not to pursue case studies involving communities where significant industrial development activity might be anticipated in the near future. Such research might be extremely disruptive to the sometimes-fragile relationships between communities and industrial development concerns and government. In addition, it is possible that such research might, in itself, create anxiety in communities under pressure for development.

It was also determined that thorough, systematic studies of communities with long histories of industrial development followed by a pull-out of industry would be difficult to accomplish. The obvious example of such a community in the ITC claim area is Rankin Inlet. However, the mine in Rankin closed in the early 1960s, and the community and its population have changed significantly since that time. This would make it difficult to obtain comprehensive information related to the development, operation, and eventual closing down of the Rankin Mine.

These considerations prompted a decision to settle on cases within the ITC claim area and elsewhere within the NWT which involved communities with a recent or a continuing history of industrial development activity. In addition, we have sought examples of industrial development involving oil companies as well as mining companies, and exploration as well as development, in selecting specific cases.

Case studies selected within the Northwest Territories and the ITC claim area are as follows:

TABLE 1
EASTERN ARCTIC STUDY MAJOR CASE STUDIES

CASE	NWT/ITC	LONG/RECENT COMMUNITY INVOLVEMENT	OIL & GAS, MINING	EXPLORATION/ DEVELOPMENT
Nanisivik Mine	ITC	recent	mining	development
Polaris Mine	ITC	recent & long	mining	development
Baker Lake	ITC	recent	mining	exploration
Beaufort Sea	NWT	recent & long	oil & gas	exploration

Figure 1. Map of Northwest Territories

This working paper deals with the development and operation of the Nanisivik mine at Strathcona Sound on Baffin Island (see map, figure 1). As seen from table 1, Nanisivik is a recent mining development within the ITC claim area.

The potential impact of the Nanisivik mine on neighbouring communities began to be a matter for consideration as early as 1972, during the feasibility study stage. The interests of the nearest community, Arctic Bay, encompassed social, economic and environmental concerns, while more distant communities such as Pond Inlet and Igloolik were most interested in economic aspects such as employment and training opportunities. The federal government, as a partner in the joint venture, also had a strong interest in seeing the mine succeed as a pilot project in northern development and in demonstrating Canadian sovereignty in the area.

Information on Nanisivik has been obtained from a number of sources. Documentation concerning development and operations has been received from Nanisivik Mines Limited, the federal government, and the Government of the Northwest Territories. The minesite has been visited, and community visits have been made to Nanisivik, Arctic Bay, and Pond Inlet. In the case of the municipalities of Arctic Bay and Pond Inlet, the visits had three main objectives:

i to inform council and other interested members of the community about the Eastern Arctic Study in general, and about the Nanisivik case study in particular;
ii to obtain information about community/industry/government interaction from members of council, local and regional government staff, and other people;
iii to review council minutes and other documentation and records relating to communication between the communities, companies, other levels of government, and other agencies, concerning industrial development.

Other interviews with individuals connected with Nanisivik Mines have been conducted in Ottawa, Toronto, Frobisher Bay, Calgary, Vancouver, Baker Lake, Yellowknife and Rankin Inlet. Early drafts of the study was reviewed by members of the EAS Advisory Committee and by individuals from Nanisivik Mines Ltd., Arctic Bay, and the federal and territorial governments.

The research effort has included preparation of a chronology of Nanisivik mine development and production activities, and the identification of specific issues which have emerged concerning these activities. The second chapter provides an overview of the case and identification of the range of issues that have been identified by communities, governments, and other interested parties. In chapter 3 we examine the issues that have particular relevance to the Eastern Arctic

Study in some detail, and present our own findings on these issues. Chapter 4 looks at the implications of our findings for future directions in local government and mineral development in the ITC claim area.

2. OVERVIEW

Introduction to Nanisivik

The Nanisivik mine is located on the northern end of Baffin Island, high above Strathcona sound. Arctic Bay, 18 miles to the southwest, is the only community in the vicinity. About 450 miles north of the Arctic circle, Nanisivik was for several years the world's most northerly metal mine. As of 31 January 1981, the deposit had undergound reserves of 3.25 million tons of silver-lead-zinc-cadmium ore averaging 12 percent zinc. A 2000-ton-per-day mill produces lead and zinc concentrate which is stored on the site for shipment to Europe during the short summer shipping season. Production figures for the life of the mine up to 1980 are shown in table 2.

TABLE 2
NANISIVIK MINE PRODUCTION, 1976-80

	1976[a]	1977	1978	1979	1980[b]
ore milled metric tons	112,000	526,000	574,300	615,500	435,000
average lead percent		2.0	1.4	1.4	2.4
average zinc percent		13.3	13.2	12.9	14.3
lead conc. metric tons		15,300	11,500	12,600	13,000
zinc conc. metric tons		117,900	128,500	133,400	104,800

Source: Canadian Mines Handbook, Northern Miner Press Ltd., various years.

[a]October to December.
[b]Production was suspended for 3½ months because of foundation problems in the mill.

The workforce is approximately 200, of whom over 50 are northern residents. The total number is increased during the summer months, when construction projects are undertaken. About 40 temporary workers are hired for this purpose, mostly in the south. The rotation schedule requires a minimum of 6 weeks on site for single status northern residents, and 13 weeks on for all others.

The Nanisivik townsite is on higher ground above the mine and mill complex. It consists of family accommodation in houses and duplexes, and a 'hotel' for single status employees. Family accommodation is available for workers as well as management, and at least fifteen houses are designated for northern apprentices who choose to bring their families to Nanisivik. Other northern employees

are assigned housing on the basis of seniority and availability. Rents are subsidized, with the maximum rent being $220 for a 4-bedroom house with heat and utilities.

In addition to housing, Nanisivik has a town centre complex with recreation facilities, school, medical centre, Hudson Bay store and government offices. One free meal per day for all workers and dependents is provided in the Dome, or dining hall. Nanisivik is considered a development area, and so is administered directly by the GNWT Regional Office. It is not incorporated, and has no community government. From time to time there has been pressure to grant municipal status to the community, but no action has been taken.

Development of Nanisivik

As early as 1910, the presence of lead and zinc was reported in the Strathcona Sound area. In 1954 the Geological Survey of Canada (GSC) mapped the area and identified both galena (lead ore) and sphalerite (zinc ore). In response to the GSC reports, Texas Gulf Sulphur (later Texasgulf, or TGS) staked 15 claims in 1957 and began a field program that continued for twelve years.[1]

In 1970, TGS began discussions with the Department of Indian Affairs and Northern Development (DIAND) concerning development plans and export licenses. However, they were unable to reach agreement. Because of this problem, transportation concerns, and their financial commitments at the Kidd Creek mine, TGS began to look for partners.

In 1972 Mineral Resources International (MRI) became involved in the project. Although they had no cash to invest, they traded their Mexican sulphur reserves to TGS in return for ownership of the Strathcona Sound property. MRI felt confident that it could meet DIAND's requirements for northern employment, one of the stumbling blocks in the quest for an export licence.[2] Negotiations for federal infrastructure assistance began.

A feasibility study was conducted for MRI by Watts Griffis and McQuat (WGM), and reserves were estimated at 7 million tons.[3] In 1973 Metallgesellschaft and Billiton AV signed long-term agreements to purchase concentrate for shipment to Europe, and became partners in the mine.

---

1. C.F. Agar, 'Nanisivik, An Arctic Mining Adventure', paper presented to CIM, Ottawa, April 17-20, 1977.
2. Ibid.
3. Watts, Griffis and McOuat Ltd., Feasibility Study of the Strathcona Sound Project for Mineral Resources International Limited, Toronto, September 1973.

The federal government was strongly interested in northern resource development at this time. In March 1972, for example, the DIAND document 'Canada's North 1970/80' emphasized the need for developments which would provide opportunities for northern economic benefits. An increase in Canadian activities in the north was also needed to demonstrate Canadian sovereignty, following the voyages of the U.S. ice-strengthened tanker, the Manhattan, through the northwest passage to the oil fields of Prudhoe Bay, Alaska.

Negotiations continued between MRI and the federal government, and by mid-1974 DIAND had decided to protect its mushrooming infrastructure commitments by joining the venture. After some bargaining, the government received an 18-percent interest in return for grants for road construction and loans for construction of the docksite, airport, and townsite.

The corporate structure of Nanisivik is shown in figure 2. The interest of Texasgulf represents a 35-percent interest in net profits after recovery of development costs. Texasgulf's share was transferred to Canada Development Corporation in 1981, when CDC took over all Texasgulf's Canadian mineral holdings. Strathcona Mineral Services was established by the two former members of WGM who had conducted the feasibility studies. Over the winter of 1973-74 they left WGM, established SMS, and entered into a contract with MRI for construction, engineering and project management services of the Nanisivik Mine.

In June of 1974, DIAND signed a Master Agreement with MRI setting out the terms and conditions for federal participation in the project. The federal government agreed to provide a surface lease for the operations, a licence to export concentrate, and infrastructure grants and loans of $16.7 million. MRI's responsibilities under the agreement were later transferred to NML.

One of the federal government's two representatives to the Board of Directors of NML summarized the terms and conditions of the Master Agreement as follows.[4]

Social Elements

1. Within three years from the start of production, at least 60 percent of the work force is to be northern residents, if humanly possible.
2. The production rate of the mine is to be such as to give at least a 12-year life to the known orebody. The company is required to spend at least $250,000 a year on further exploration in the general region for ten years in addition to exploring the known orebody for extensions, all with a view to extending the life of the mine.

4. A.B. Yates, 'Nanisivik - The Place where Things are Found', CIM Bulletin, October 1975.

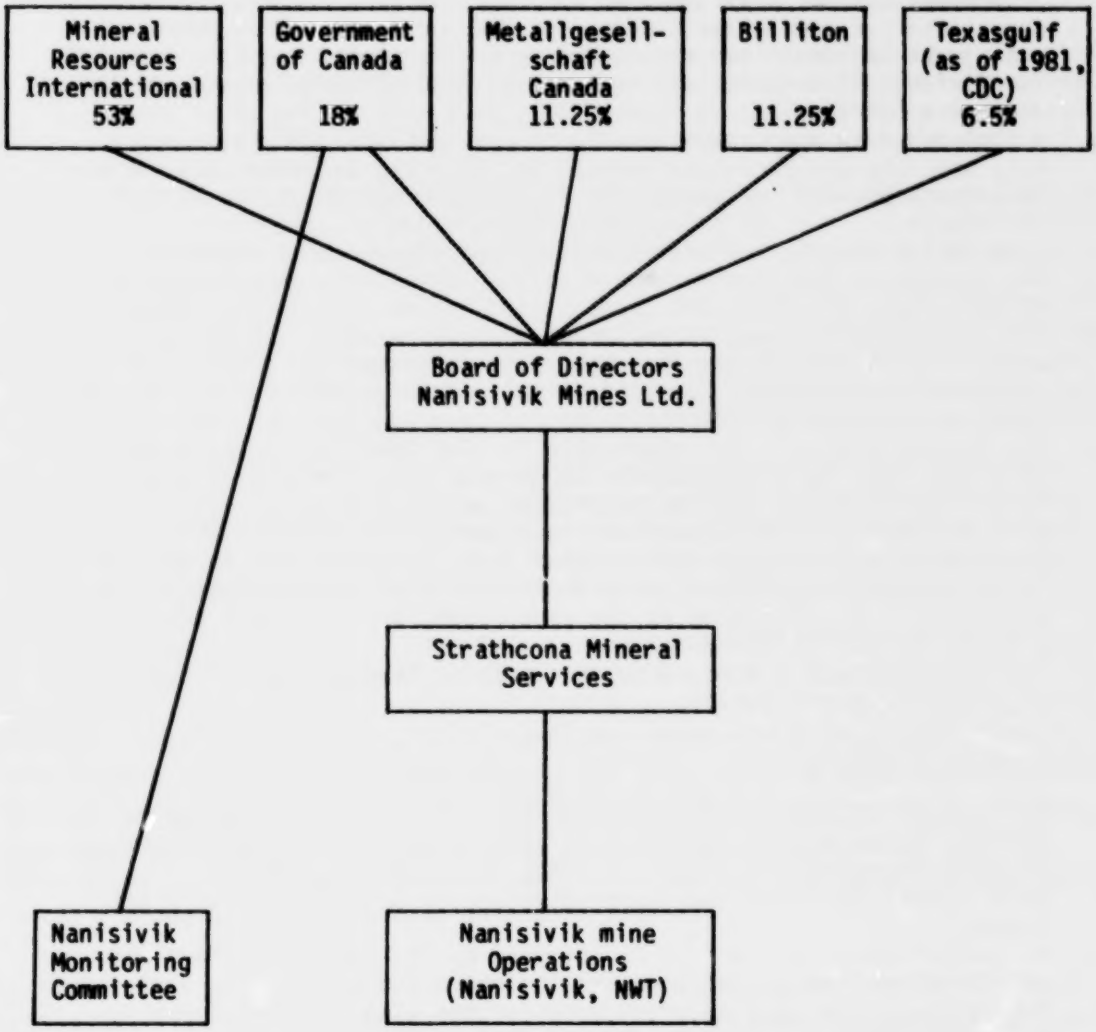
Mineral Resources International 53%
Government of Canada 18%
Metallgesell-schaft Canada 11.25%
Billiton 11.25%
Texasgulf (as of 1981, CDC) 6.5%
Board of Directors Nanisivik Mines Ltd.
Strathcona Mineral Services
Nanisivik Monitoring Committee
Nanisivik mine Operations (Nanisivik, NWT)

Figure 2. Corporate Structure of Nanisivik Mines Ltd.

3. Employment policies are to be developed in consultation with the Commissioner of the Northwest Territories and work schedules are to be developed compatible with traditional pursuits.
4. All working and safety instructions are to be provided in Eskimo syllabics in addition to the two official languages of Canada.
5. An Employment and Training Committee comprising officials of the NWT government and the Department of Manpower and Immigration, a company representative and an Inuit member of the workforce is to review all employment and training matters and to report to the Minister of DIAND, the Minister of Manpower and Immigration, and the Commissioner of the Northwest Territories.
6. A minimum of 12 apprentices are to be provided for, and the company will meet the standards and provide the training for these apprentices in accordance with the Apprentice Training Ordinance of the Northwest Territories.
7. Orientation courses are to be provided for non-northern employees of the company to familiarize them with the social and cultural patterns of the Inuit.
8. The townsite is to be a flexible one designed to meet the expressed wishes of the workforce. The company is obligated to consult with the neighbouring Settlement Councils in so far as the project affects the interest of these settlements.
9. The Commissioner will be responsible for the townsite costs' being recovered from the ratepayers in the normal way. The mix of single and family accommodation will be determined as the project develops and will depend to a large extent on the wishes of the workers themselves.
10. The company will conduct social research to determine the social impact of its project in consultation with the Minister and the Commissioner.
11. Alcohol will be restricted in the development area at least until local government is established.
12. Any telephone system that is established for the mine must be extendable to the general public.

Environmental Elements

1. The company is required to carry out baseline studies of living resources in the area to facilitate effective protection and management of those resources that might be affected by the development.
2. Water supply and water quality studies are to be carried out by the company.
3. Air pollution effects are to be analyzed by the company, as are the operating implications of atmospheric inversions.
4. The company is to develop procedures for the minimization of concentrate spillages.
5. Extensive and detailed studies are required from the company with respect to the method of tailings disposal. Two alternatives are being examined: disposal on land; and disposal into Strathcona Sound.

General Matters

1. The government has agreed to provide an Arctic Class 'B' airport at an estimated capital cost of $3.5 million, a public cargo shipping wharf at an estimated capital cost of $3.8 million (75 percent of which is

recoverable from the company through user charges), roads connecting Arctic Bay, the airport, the wharf and the townsite at an estimated capital cost of $2.1 million, and assistance toward the townsite development, including CMHC and other loans, estimated at $7.3 million. Of this total amount of $16.7 million, approximately $8 million was estimated to be recoverable.

2. The government will obtain 18 percent equity in Nanisivik Mines Ltd. in return for the above infrastructural assistance.
3. The government is entitled to representation on the board of directors in proportion to its equity participation. Currently, this involves two directors -- one is an Inuit member of the work force from Arctic Bay, Percy Pikuyak; the other is Barry Yates, now with the Northern Pipeline Agency.
4. In the event of any over-run in the financing that would earn equity, the government is entitled to first refusal.
5. The project is to be effectively and beneficially controlled by Canadians at all times.
6. Export authorization has been granted for 1,800,000 short dry tons of lead and zinc concentrates or such lesser amount that may be required to provide the cash flow necessary to repay private loans to the project. Upon expiry of the initial period, at least 50 percent of the further concentrates must be processed in Canada, if this can be done effectively.
7. Canadian ships are to be used for the transport of supplies to the project and products from the project subject to their availability and competitiveness. Provision in the agreement is made for short-term authorization of non-Canadian ships if necessary in the early stages, but such arrangement are to be subject to cancellation after two years.
8. Canadian services, materials and equipment are to be used on the project subject to their availability and competitiveness.

Construction of the docksite, mill, town, and roads continued over the next several years, along with underground development, a concentrate storage shed at the dock, and pipelines for tailings disposal and fresh water supply. Production began officially in February 1977, and a new decline adit was added in 1979. Subsidence of the mill due to melting of an ice lens under its foundation halted milling operations for 3½ months in 1980.

An exploration program has been carried on for several years, in an effort to extend the mine life. Although the 1980 program succeeded in maintaining the reserves at the previous year's level, no finds have yet been made which suggest that the life of the mine will be prolonged significantly.[5]

Because it had no producing mine elsewhere to provide a cash flow, Nanisivik Mines Limited has been in a fairly tight financial position since its

5. Hickling-Partners, 'Evaluation of the Nanisivik Project', May 1981.

inception. This situation has not been helped by such factors as restrictions on rate of production, high transportation costs, and short shipping season. Inflation and high interest costs add to the burden of stockpiling the concentrate for most of the year. Metal prices are critical to the success of the mine, and NML management was able to improve its revenue prospects late in 1981 by renegotiating its concentrate contracts with its European partners.

It is estimated that the lifespan of the Nanisivik mine, on the basis of current ore reserves and rate of production, will be another five or six years (i.e. to 1987 or 1988). The project is expected to be debt-free by 1985, and begin to return a profit to its owners. From the beginning of development to late 1981, almost 400 northerners have been exposed to the mining industry through employment on the project, and a substantial amount of money has been put in circulation in the Baffin region.

Summary of Issues Raised in the Nanisivik Study

Community Consultation in the Planning Phase

The Nanisivik mine has had significant effects on the community of Arctic Bay, only 17 miles distant. During the planning and development stages, Arctic Bay residents were concerned about the potential socio-economic impacts of the development on their community, as well as possible environmental effects in their hunting areas. They wished to minimize potential social and environmental costs to their community, and maximize potential economic benefits. More distant communities in the Baffin were mainly interested in the economic benefits of employment. Along with Arctic Bay, they were also interested in working conditions that were reasonably compatible with their lifestyle.

The actual opportunities for communities to be consulted and informed on their areas of interest and concern are an important aspect of this case study. Arctic Bay in particular has complained that it was not adequately consulted about the development, and other observers have noted that there was little communication with communities about the employment potential among northern residents.

Other-Agency Participation in the Planning Process

It is of interest to the study to understand who actually participated in the planning, in what areas their interest and concerns lay, and what was their source of influence in the decision-making process. Principal roles in planning

were held by MRI, their consultants WGM, and later by SMS who contracted to design and operate the facilities. DIAND also played a major role in planning the development, and other participants included the GNWT and 16 federal departments and agencies who were members of the Strathcona Sound Working Group.

There was no participation by local or regional governments, or by native, environmental, or other public interest groups. This raises the question of whether or not the planning process considered and protected the interests of all the parties that were affected.

Participation in the Monitoring and Regulatory Process

Regulation of development and production activities were handled through the departments, primarily DIAND, with responsibility for the relevant legislation and regulations. In addition, two committees were set up to monitor the principals' compliance with the terms of the Master Agreement in the course of operations. As in the case of planning, the question of consideration of all relevant interest is central in this issue.

Political Impact on Arctic Bay

The Nanisivik mine and townsite contributed to political changes in Arctic Bay. One GNWT official has suggested, for example, that the settlement of Arctic Bay was upgraded to hamlet status before it met the customary criteria, in order to give it greater control over its own affairs, protect it from competition from Nanisivik, and help minimize any potential negative effects of the development. Others, however, feel it was just as capable as other hamlets.

The four criteria identified by the GNWT Department of Local Government are:

i understanding of the nature of the responsibilities of hamlet status;
ii capability of elected officials to accept increased responsibility;
iii capability of appointed officials to accept increased responsibility;
iv capability of technical people at the local level to accept increased responsibility.

On the other hand, it has also been suggested that upgrading had in fact been effectively delayed by Nanisivik and other developments, particularly Panarctic, because all the Inuit who spoke English and who would otherwise have helped

to meet the criteria were employed outside the community.[6] However, exposure to employment and to the consultation process over the long term contributed to growth in the political activities and skills in the community.

Social Impact on Arctic Bay

The development at Nanisivik had considerable potential for bringing social change to Arctic Bay. As early as 1972 the Baffin Region Administrator recommended a study of this potential, and it was also made a condition of the 1974 Master Agreement. However, when it was completed in 1979 it was an after-the-fact study, observing rather than anticipating effects.[7] This raises several questions. Was it possible to identify appropriate areas for concern over social change in Arctic Bay during the planning process? Were the fears of social disruption that did arise actually realized? Will the lessons learned from the experience of Arctic Bay and other communities be incorporated into future planning processes?

The future holds further potential for social change. Closure of the Nanisivik mine is a possibility as early as 1988. However, no studies are underway to determine what effect this will have on the community of Arctic Bay, or how to mitigate any undesirable effects.

Employment and Training of Northerners

Employment and training opportunities for northern residents was seen by both federal and territorial governments as a major benefit of the Nanisivik development. However, there has been considerable criticism of this aspect of the operations, both by the two monitoring committees and by other observers.

Since securing economic benefits for northerners will be an important consideration in establishing future regimes for regulating the mineral industry in the north, this is an issue of importance for the Eastern Arctic Study. The questions raised in this area include usefulness of quotas, the availability of qualified northerners interested in wage employment, training programs geared to Inuit trainees, and rotation schedules.

---

6. Levi Kalluk, quoted in We Don't Live in Snow Houses Now, Canadian Arctic Producers Ltd. 1976.
7. Baffin Regional Inuit Association, Socio-Economic Impacts of the Nanisivik Mine on North Baffin Regional Communities, November 1979.

Economic Spinoffs for Northerners

Economic spinoffs for northern businesses are an important source of potential benefits to northern residents from resource developments in this area. The study will consider the suggestion made by some observers that the potential benefits have been reduced in the case of Nanisivik by the creation of a separate townsite and by some company policies.

Environmental Issues

The principal environmental issue related to the Nanisivik development has been the disposal of mine tailings. There was concern that seepage from the tailings ponds could adversely affect mammals and fish in Strathcona Sound. The lack of environmental baseline data has complicated the issue.

A second issue, although one that has received very little attention, relates to the disposal of sewage from the townsite. There has been criticism of both the operation and the monitoring of the sewage treatment facilities.

Nanisivik as a Pilot Project

The federal government has been widely criticized, by both external and internal critics, for its involvement in the Nanisivik development as a pilot project in northern mining. However, there seems to be a growing realization that much of this criticism is unjustified, and that in fact many of the original objectives of the project have been met. At the same time, much has been learned, there have been some real benefits to northerners, and little environmental or social disruption has resulted.

This study will consider several aspects of the accomplishments of Nanisivik as a pilot project.

The Use of Monitoring Committees

The Master Agreement called for creation of two monitoring committees to ensure that the terms and conditions of the agreement were met. However, this raises the question of the effectiveness of bodies with no sanctions or leverage in policing such agreements.

The Choice of Nanisivik for Government Equity Participation

Nanisivik is a relatively small deposit, with a marginal financial position. It is also a private corporation, and so its financial statements are not available to the public. Both these factors raise questions about the suitability of Nanisivik for government equity participation.

Relevance of Issues to the Eastern Arctic Study

In selecting issues for study, we have looked for three characteristics:

i they are directly connected to community/company/government interactions;
ii they have been a source of controversy, and so there is some documentation and opinion available;
iii they provide insights which will be of value in developing our scenarios for the future structure and process of local government and of regulation of the mineral industry in the ITC claim area.

All but one of the issues in this chapter meet these criteria. Only the political impact on Arctic Bay has been omitted from further consideration, because its effects have been relatively small and noncontroversial.

3. NANISIVIK ISSUES RELEVANT TO THE EASTERN ARCTIC STUDY

Community Consultation in the Planning Phase

Arctic Bay is a North Baffin community of about 400 people, most of whom are Inuit. The residents rely heavily on hunting and fishing for food and income. It is linked to Nanisivik by road, and provided a large proportion of the northern workforce for the mine during the exploration and construction phases, and a smaller number during production. Although only 3 of the Nanisivik workers were actually residing in Arctic Bay in the summer of 1981, an additional 9 workers living at the Nanisivik townsite were from Arctic Bay and had close ties there.[8]

The other communities that were most affected by the Nanisivik development include Igloolik, Hall Beach, Clyde River, and Pangnirtung. Their main interest in the development has been related to employment.

The Nanisivik mine was the first mineral development in the North Baffin area. Residents of Arctic Bay were aware of the mineral potential of the area from the early years of Texasgulf's field program. By 1969 as many as 16 Inuit from Arctic Bay were employed in the exploration program. Although TGS began negotiations with DIAND for development of the project in the following year, however, their contacts with Arctic Bay seem to have been limited to employment.

This situation changed in 1972, when Mineral Resources International (MRI) took over ownership of the deposit and Watts Griffis and McOuat (WGM) continued their feasibility study. Graham Farquharson and Jim Marshall of WGM met officially with the settlement council in late August, and continued the practice every six months or so until 1975, when construction began. At the first visit, such matters as development plans, employment prospects, and townsite alternatives were discussed.[9,10]

Although all these matters are of importance, we have singled out the question of the location and nature of the townsite to illustrate the degree of community involvement in planning. The townsite question is probably the best documented, and the results are clearly visible.

---

8. Nanisivik Mines Ltd., 'Northern Resident Report', internal NML report, July 31, 1981.
9. C.F. Agar, 'Nanisivik, An Arctic Mining Adventure'.
10. Robert Gibson, The Strathcona Sound Mining Project, Science Council of Canada Background Study No. 42, February 1978.

During 1972, residents of Arctic Bay became aware of some of the implications of various townsite alternatives. They were most concerned about a proposal to move their entire town to the Strathcona Sound location. Nor were they happy with an alternative suggestion to leave Arctic Bay intact and build family accommodation for Inuit workers at Nanisivik.

The first proposal would take them from a location that offers many advantages. Among other things, Arctic Bay is in a very beautiful setting. It is sheltered from the north wind; it has a southern exposure to take maximum advantage of the short summer; there is better hunting and fishing, and better access to the water. The second proposal also appeared to offer disadvantages. It was feared that Arctic Bay would be damaged by loss of leadership if its best people moved to Nanisivik, and a loss of economic spinoff benefits was foreseen if family accommodation for workers, including Inuit from other communities, was not located in Arctic Bay.

In November 1972, Arctic Bay residents wrote to WGM stating that, although they had not been consulted by the company or by either government, they wished to express their preferences with regards to the proposed townsite. The letter was signed by the chairman of the council, and by 98 other residents. It recommended that bunkhouse facilities only should be built at the site, and that families should live in Arctic Bay. This would necessitate improvements to the road, airstrip, and health and educational facilities in Arctic Bay.[11]

The community received a conciliatory but noncommital reply from WGM, as well as communications from GNWT officials warning of possible harmful social impacts of the additional families and improved access, and of potential problems with the water supply.

Meanwhile, the feasibility study continued. WGM had determined that the project could support a bunkhouse operation with worker rotation. However, it was becoming clear that the two governments, and particularly the GNWT, favoured a new townsite, because of potential spinoff benefits, and because it offered a chance to experiment with building a model community for northern conditions. Farquharson wrote to DIAND in February 1973 advising that, if a full community was needed, government assistance for infrastructure costs would be required.

Company and government officials met again with the settlement council in February and August of 1973. According to Gibson's study of the decision-making process related to Nanisivik, the February meeting was the first of any consequence between the proponents and the community, in that a serious attempt was made to

11. Robert Gibson, The Strathcona Sound Mining Project, p. 71.

provide information and solicit opinions. However, he reports that it was unsuccessful in that either the information provided was inadequate or it was not presented in a manner which could be understood by the people of Arctic Bay.

By August, the feasibility study was virtually complete. At that meeting the townsite plan was presented by WGM as a fait accompli, and council was asked for views on peripheral items such as timing of road construction. The feasibility study was submitted to MRI the following month. It recommended family accommodation at Nanisivik for senior management, and bunkhouse accommodation with rotation for both northern and southern workers. In November 1973 the GNWT approved the creation of the new townsite.

Although Arctic Bay received 50 pages of excerpts in November 1973, a complete copy of the consultants' report did not arrive until February 1975[12]. Council promptly wrote the GNWT commissioner, protesting the lack of consultation and delay of information. The council's letter maintained the following:

- early consultations were mere tokenism;
- information on the plans for the Nanisivik townsite was withheld or delayed;
- in planning for the new mine, little attention was paid to the social impact on Arctic Bay;
- Arctic Bay had been misled by the consultants into rejecting help from ITC early in 1973;
- the feasibility study was not received by the settlement until February 1975, and it was not until this time that the mine's plans were fully revealed to the settlement.[13]

Clearly, by 1975 Arctic Bay did not consider that it had been consulted adequately.

Early in 1974, government officials visited the Baffin communities of Hall Beach, Igloolik, Pond Inlet and Clyde River to collect labour-force information. This was apparently the first official communication with these communities about the project, and there was little opportunity for community input. Once the Nanisivik townsite was under construction in 1975 and 1976, community representatives from Arctic Bay, Pond Inlet, Grise Fiord, Frobisher and Clyde River were invited there by company officials for periodic visits. Apparently the nature of the townsite was a subject of discussion, because one observer reports that the company was somewhat surprised when, at the very last such meeting, Inuit workers who were already employed at the site stood up and said

12. Robert Gibson, p. 83.
13. Cited in full in Gibson, p. 157.

that the community representatives did not speak for them. They argued strongly that they wanted housing in Nanisivik so they could bring their families.

At the time, there was no money left for additional housing, and no provision at all for Inuit family housing. The Master Agreement specified that the mix of single and family accommodation was to be determined to a large extent by the workers themselves, and the response to the workers' request was rapid, although it seemed to run counter to the views of the official community representatives. The NWT Housing Corporation agreed to finance fifteen more houses, provided at least fifteen of the houses in Nanisivik were designated for Inuit use, with priority given to apprentices. At the same time, the company decided to add married quarters for some southern workers as well. This led to phase 2 of the townsite, with additional housing and services. This was not in line with Arctic Bay's wish to have workers' housing and other facilities in Arctic Bay.

Arctic Bay contends that it did not really participate at all in the townsite planning process. There is no evidence to suggest that the situation was any different for other aspects, such as the development decision per se, for the road and airport planning, or for the drawing up of the Master Agreement with DIAND which set out the government's goals with respect to the project. Neither the settlement manager nor the council received any requests for information from the planners. The Master Agreement was not seen by anyone from Arctic Bay before it was signed at Frobisher on 18 June 1974. The appearance of community approval may have been created by the fact that two representatives (L. Kalluk and I. Attagutsiaq) attended the signing ceremony and signed as witnesses. However, neither could read English.

The concerns of Arctic Bay with regard to consultation raise a number of questions. On what issue should a community be consulted? How is consultation defined? Who is responsible for providing information on which decisions should be based? All these questions and more must be answered in order to create effective mechanisms for community/industry/government interaction with respect to resource developments.

Other-Agency Participation in the Planning Process

The early planning for the Nanisivik project was entirely in the hands of the consultants, WGM. The principals of WGM then moved to Strathcona Mineral Services (SMS) when it was formed in 1974, and continued in their planning and management roles for MRI, the owners. DIAND became involved as early as 1970, when Texasgulf first sought export licenses, but their role increased considerably once WGM entered the scene.

It appears that close contact between DIAND and WGM was maintained throughout the feasibility study, and that DIAND's wishes carried a great deal of weight. This impression is strengthened by the fact that Cabinet approval in principle for the required $16.7 million in grants and loans was received within six months of submission of the study. This is an extremely brief period for such a complex and innovative undertaking.

DIAND continued in a leading role throughout preparation of the Master Agreement, which was signed in June 1974. The federal government's infrastructure assistance gave it extremely strong leverage in negotiating the terms of the agreement with the company. Perhaps the most telling instance of the strength of the federal position is the fact that they were able to insist on at least a 12-year life for the mine, as opposed to the 8-year life originally envisioned by the consultants.

Negotiation of the agreement was handled by a special Interdepartmental Working Group on the Strathcona Sound Project[14], which formed into sub-groups to consider individual aspects and clauses of the proposal. The group had representation from the GNWT and from sixteen federal departments and agencies, including MOT, Industry, Trade and Commerce, EMR, Manpower and Immigration, Environment, Fisheries, Central Mortgage and Housing, Finance, Treasury Board, Northern Canada Power Commission, FIRA, Health and Welfare, and Justice. The major participants were DIAND, MOT, and the territorial Department of Public Works. However, DIAND retained control of negotiating and writing up the final agreement. Some of the other departments were less than enthusiastic about the project, but DIAND was able to obtain Cabinet approval.

The role of the GNWT was less distinct, and tended to be limited to matters of townsite construction, employment and training, and social impact. The GNWT were the major force behind the creation and planning of the new townsite, and had the responsibility for its construction. They were also closely involved in the training program. GNWT's regional director at Frobisher Bay recommended a study of the potential social impact of Nanisivik on the Baffin area. Although the idea was turned down by the GNWT executive, an after-the-fact study was later incorporated into the terms of the Master Agreement.

There was very little participation by non-governmental bodies in the planning process. The Arctic Bay Settlement Council believed that the Inuit Tapirisat of Canada (ITC) opposed the Nanisivik development and wrote ITC in 1973 stating

14. Originally called the Strathcona Sound Project, the development was renamed Nanisivik (an Inuit word that has various translations, including 'the place where things are found' and 'the place where things that were lost are found again') before the Master Agreement was signed.

that council supported the project, and asking ITC not to speak on behalf of the people of Arctic Bay unless the community so requested. ITC was therefore effectively excluded from the planning process. It is ironic that ITC might very well have been willing to help Arctic Bay, in spite of its position of opposing all development before settlement of land claims. In the same year, ITC President Tagak Curley had written:

> 'without the involvement of the Inuit people in the planning and developing of mining in the Arctic, it seems obvious that social problems will be perpetuated. ITC is seeking to develop the spirit of cooperation between the Inuit people, the mining industry, and government which will be important to all parties.'[15]

However, ITC did not get in touch with Arctic Bay, inform it of the ITC position, offer help, or ask for information, until the next year.

Participation in the Monitoring Process

The Master Agreement between DIAND and MRI called for establishment of a monitoring committee, and thus provided a unique opportunity for setting up a process for monitoring the performance of a mineral development. The Nanisivik Monitoring Committee evolved out of the Working Group on the Strathcona Sound Project. Its membership consists of representatives from DIAND, other federal departments, and the GNWT. Consideration is now (early 1982) being given to the appointment of two Inuit to the committee.

The role of the committee is to monitor compliance with the terms and conditions of the Master Agreement. Seven component groups deal with specific topics, and report to the committee through its coordinator (see figure 3). The committee itself meets every six months, and generally meets with company officials immediately following its own meetings. The first official meeting was in January 1978,[16] and the first meeting with NML followed 3 days later. At both of these initial sessions, items discussed included:

- training and employment of Inuit (too low);
- mine production rate (too high);
- exploration (no plans or results available).

---

15. Tagak Curley, telex to N.A. Lawrence, Chairman, 6th National Northern Development conference, Edmonton, October 31 - November 2, 1973. Quoted in Inuit Monthly, October/November 1979, p. 28.
16. Minutes of Nanisivik Monitoring Committee, 27 January 1978.

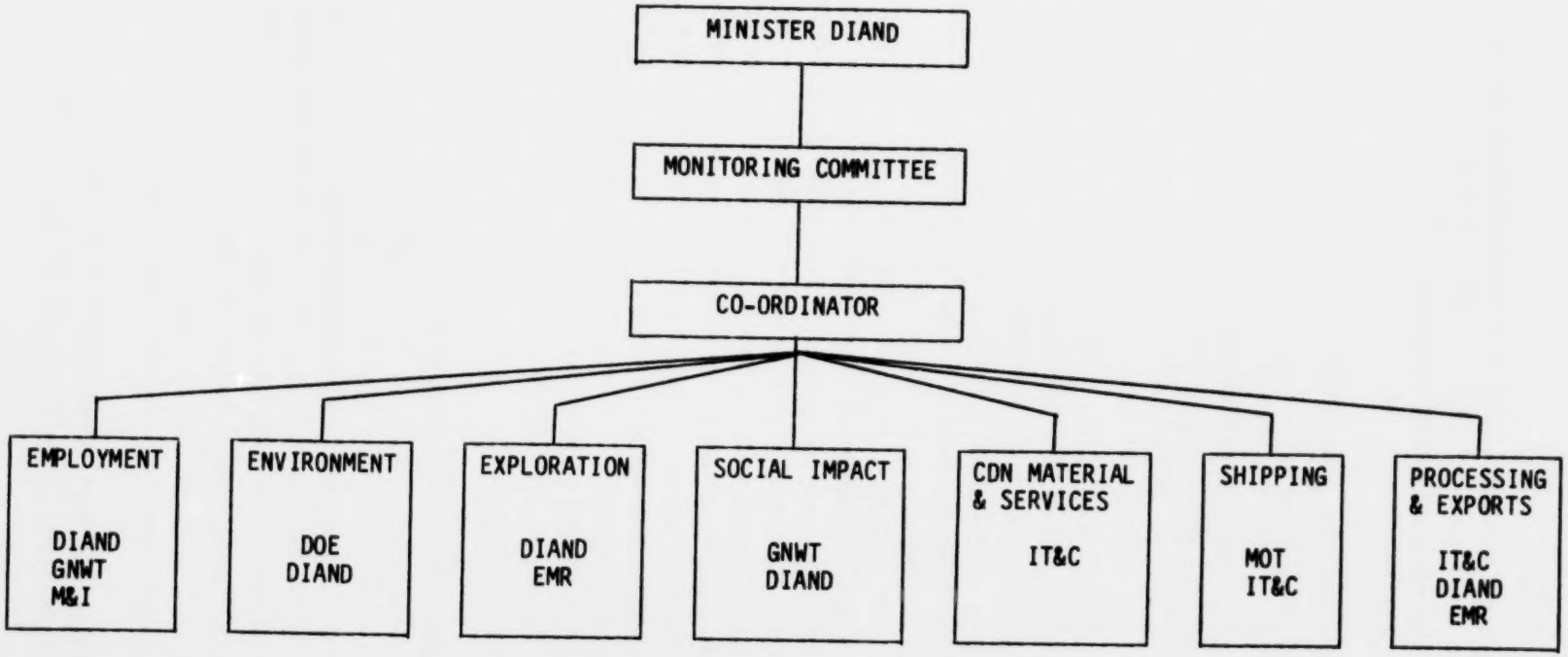

Figure 3. Nanisivik Monitoring Committee

Source: Gibson, Robert, Strathcona Sound: A Case Study in Government Decision Making, Science Council of Canada Background Study No. 42. (Ottawa, 1978), page 228.

The committee meets twice each year, and these complaints continued to be raised at virtually every meeting up to the middle of 1981. Committee members and other observers have described the monitoring committee as ineffective, largely because the same problems kept reappearing.

In 1980 MRI submitted an 'Action Plan' for its training and employment program. Minutes of the September meeting describe the plan as '...inadequate. It lacks understanding of what is required.' However, some progress has been made recently. Late in 1980 NML acquired a new administration superintendent and a new supervisor of personnel and training, and in early 1981 a new mine manager was appointed. All three were making efforts to help the company to move in the right direction. Early in 1982 the position of training officer was created, and a program was instituted to define standards, issue monthly progress reports for individual trainees, and certify levels of accomplishment. Some improvement in the exploration program has been noted as well, although no significant expansion of reserves has resulted. Unless a major find is made, the rate of production will probably continue to be too high to ensure the lifetime of 15 years that was originally hoped for by DIAND.

A second committee, the Training and Employment Advisory Committee (TEAC), was established by the Master Agreement to deal specifically with compliance with northern training and employment conditions in the agreement. Members of TEAC included representatives of the GNWT and Canada Manpower, as well as Simeonie Allarut, a carpenter from Arctic Bay who moved to Nanisivik while he was employed there. TEAC met every month until February 1981, when the chairman decided that such frequent meetings were unproductive and costly.

The chairman feels that the reporting system of his committee is too indirect to be effective, and that the committee has had little impact. As of late 1981, he had not called another meeting.

There seems to be general agreement that, although both committees have stayed in close touch with developments at Nanisivik, they have been ineffective as a means of enforcing compliance with the terms of the Master Agreement. In view of this, and since their membership excludes formal representation of local or regional bodies, their role seems to have been principally to facilitate communication within and between the federal and territorial governments about company activities.

Social Impact on Arctic Bay

In 1972, as the negotiations between the company and DIAND and the GNWT got seriously under way, GNWT officials in the Baffin became anxious about the potential impact of the development on communities that would be affected by the physical presence of the mine and by the possibility of negative as well as positive effects that might result from the opportunities for wage employment for Inuit that were promised. A social impact study to anticipate these effects was approved by the assistant commissioner, but rejected by the GNWT Executive Committee. Arctic Bay was not aware of this proposal at the time, but would have supported it strongly.

Residents of Arctic Bay, probably under the guidance of Arctic Bay councillor Kenn Harper, also began to consider what the future might hold. At that point Arctic Bay wanted the development to go ahead, but with some qualifications. For example, council objected to the idea of building a townsite at Nanisivik. It was feared that such an approach threatened to draw off their ablest inhabitants, leaving them depleted in terms of leadership talent. It would also eliminate their chance to benefit economically by having in their own community the new facilities and services that the incoming population would require. Chances for spinoff business opportunities such as stores and hotels would be hurt as well. There was even the possibility, raised by a GNWT Economic Development official, that the whole town could be moved to the much-less-desirable location above Strathcona Sound, where it would be overwhelmed by strangers.

GNWT fears, on the other hand, included concerns about the social impact of worker accommodation in Arctic Bay and of good transportation links with the mine. The regional administrator pointed out the problems of policing, drug abuse and alcohol consumption in particular that have arisen in the north as a result of southern contacts, and wrote the settlement council urging it to consider these problems. Contrary to the wishes of Arctic Bay, the decision was made by the GNWT to house both northern and southern workers and their families at Nanisivik.

In 1974, the Master Agreement formally required the company to conduct social research to determine the impact of its project. Since this was to be an after-the-fact study, it would not be designed to avoid new problems so much as to identify and perhaps alleviate existing problems. Arctic Bay expressed its concern at this post facto approach to social matters in 1975, when it complained to the GNWT Commissioner about the lack of consultation and information.

There is some evidence that Arctic Bay's fear of losing its ablest citizens to outside employment began to be justified as early as 1975, although the princi-

pal culprit identified was not the Nanisivik mine. According to Levi Kalluk, chairman of the first settlement council in 1967 and now mayor, 'We could have become a hamlet before (1975) but we had nobody who spoke both languages. All the people who spoke English were away, either working for companies like Panarctic, or at school.'[17] Nevertheless, by 1976 the community was upgraded to hamlet status, permitting it to have greater control over its own municipal affairs.

Since production began in 1977, the loss of population to the Nanisivik townsite has been relatively small. Over the years about 8 or 10 workers, some with their immediate families, have moved to Nanisivik. There is no physical sense of depletion or decay at Arctic Bay, however, because of the inflow of cash from wage employment to maintain housing, and because there have been some arrivals from other communities. Nor is there any vacant housing to speak of. Residents of Arctic Bay are generally pleased that their community has not changed greatly as a result of the Nanisivik development.

The socio-economic impact study published by BRIA in 1979 found few negative effects of the development on the Inuit population in north Baffin. The Inuit workers were generally pleased with their jobs, and competent in them. The increased spending power had not seemed to lead to significant increase in drug or alcohol use, although there was some, along with gambling. (Our inquiries indicated that gambling serves as a quick and effective means of distributing the wealth of the wage earners among the rest of the population.)

During our visit to Arctic Bay, we noted that the community is homogeneous and attractive. It has preserved its Inuit character, and taken advantage of the increased level of earnings to upgrade accommodations and keep resource harvesting equipment in good condition. Some spinoff businesses have developed, but not many. Hunting and trapping activities are still very strong, and are made easier by the equipment purchased with wage earnings. The impact of Nanisivik seems to have been cushioned by the separation of the two communities. The bad condition of the road may be a blessing in disguise.

Because there has been no influx of southern workers, the community has been able to retain control of the council and other municipal bodies. At the same time, wage employment has encouraged the development of entrepreneurial skills among some residents. Others have acquired practical skills that can be taken to other projects when Nanisivik closes. These factors will help to protect the community from the impact of closure, which could occur as soon as 5 or 6 years in the future.

---

17. Levi Kalluk, in 'We Don't Live in Snow Houses Now'.

Since Nanisivik is the only large employer in the immediate area, closure will result in a significant loss of income and economic activity in the north Baffin. However, the Monitoring Committee decided at its meeting of 18 November 1981 that it is premature to discuss the question of alternative uses of the Nanisivik townsite after closure. Since closure is inevitable and coming up quickly, it is difficult to understand why no major studies are under way to help anticipate and counteract its social and economic impacts on both Arctic Bay and the Nanisivik townsite.

Employment and Training

From the early 1970s, DIAND saw the Nanisivik development as a means to promote wage employment and economic growth for the people of north Baffin. When MRI became involved, its president, Frank Agar, recognized DIAND's concern and felt that MRI could cooperate effectively. Agar noted: 'I learned that DIAND was primarily concerned, as a condition for the (export) licence, with developing maximum job opportunities and benefits for the Inuit. Since we believed that strong participation by Inuit was essential to the long-term workforce of the project, our objectives were compatible.'[18]

This mutual interest in Inuit employment was reflected in the Master Agreement, which aimed at a work force that would have at least 60 percent northern residents within three years of operation. However, in spite of the initial enthusiasm, the quota has never been met or even approached. Up to the present, the proportion of Inuit employees has stayed around 20-25 percent. Furthermore, it was only in 1981 that the company approached the specified minimum of 12 apprentices. Up to June of 1981, only 2 apprentices had succeeded in completing the four-year training program.

Public relations contacts with northern communities for recruitment for the construction and mining phases began as early as 1972, when WGM officials discussed employment prospects with the Arctic Bay council. In 1974, officials from DIAND and GNWT visited Hall Beach, Igloolik, Pond Inlet, Clyde River and Arctic Bay to collect information on the potential labour force that would be available. Their report, published in March, was probably overly optimistic in terms of the potential. For example, it apparently ignored the fact that in Arctic Bay and Pond Inlet, the two communities closest to Nanisivik, there had been little unemployment since Panarctic had begun hiring Inuit workers.[19]

---

18. C.F. Agar, 'Nanisivik: An Arctic Mining Adventure'.
19. Gibson, p. 94.

The Monitoring Committee has kept up continual pressure on Nanisivik Mines Limited to increase the level of employment and training of northerners, and has questioned the vigour of the company's efforts in providing suitable accommodation, training, and employment opportunities. However, the company is somewhat constrained because the northern supply of trained or trainable labour is limited,[20] and because there is considerable competition for northern workers from oil companies.

Furthermore, there is wide agreement that the company has a serious problem in training some of the workers that it does manage to recruit, because of the quality of education in the NWT. Many of the northerners who were interviewed criticized the NWT educational system for lack of rigour and discipline, and lack of training in employment skills. In addition, difficulties were cited in sending young people, who have finished grade 10 or more in their home community or at a regional high school, to Frobisher Bay or Fort Smith for pre-apprenticeship training, because of social problems that have been known to send them back to their homes in disgust. On the other hand, at least one southern tradesman stated that he thinks the NWT apprenticeship program is excellent. In his view, access is much easier and less competitive than in the south, and potential accomplishments are limited only by the ability and attitude of the student.

A further problem has been the preparation of course material for on-the-job training in Inuktitut. This has been a difficult and sometimes apparently impossible job, in view of technical concepts that simply do not exist in Inuktitut. However, the company is making some progress on that task.

Some GNWT officials have suggested that too much responsibility for training has been placed on the company, with too little assistance from government. They feel that the GNWT should, for example, facilitate training programs as requested by companies. As much as possible, such training should not require travel outside of the trainee's home region.

Evidence of the government's recognition that the 60-percent quota was unrealistic can be found in the fact that government officials advised Cominco not to contemplate a native employment quota for Polaris. In view of the records of both the GNWT and DIAND in terms of recruitment and training of northerners, it is difficult to understand how the 60-percent quota was included in the Nanisivik Master Agreement.[21]

---

20. Of the 11 apprentices in training at Nanisivik in July 1981, only 2 had grade 12 education, and 4 had less than grade 10.
21. The GNWT, which has the better record for employment of northerners, has never exceeded a level of 50 percent northerners in the Baffin and Keewatin regions.

In 1980 NML produced an 'Action Plan' designed to improve its recruitment and training programs. A recruitment trip to Broughton Island, Clyde River, Hall Beach, Igloolik and Cape Dorset was made in November, and 19 new northern hires plus 8 rehires of former employees resulted by July 1981.[22] The new supervisor of personnel and training was hired in 1980, and by late summer of 1981 there were 11 northern apprentices in the program, and a twelfth under consideration. More rigorous screening of candidates and an improved program is expected to result in a significantly higher success rate. Supplementary education is being offered to first-year apprentices to help them master some of the academic subjects needed for their technical training. The mine manager himself gives one of the courses.

Early in 1982 a new program was initiated to define standards and terms of reference for fairly detailed levels of experience and achievement. In addition, all new employees must now qualify in industrial and safety standards before they start working on production-related jobs. Certificates will be available for this and all other levels, and can be used at other locations to describe skills and experience.

Teaching methods and courses used in the educational system in the Northwest Territories are based on southern models, mainly Alberta's. Some observers have suggested that the traditional Inuit lifestyle produces individuals that are much better adapted to learning in a hands-on situation than in classrooms. The training experience at Nanisivik may provide answers to questions about the most appropriate teaching techniques for northerners. However, it also raises the question of who is responsible for developing appropriate teaching techniques: the employers or the territorial and federal governments? Cross-cultural training for educators and supervisors has also been recommended, but again the question of responsibility for developing and delivering such training has not been determined.

Several sources have noted that companies that employ and train native northerners face increased costs as a result[23]. Nanisivik supervisors estimated that the increase in costs might be as high as 25 percent, even when southern recruitment costs are taken into consideration. However, they also independently volunteered the information that they thought it was in the national interest for firms to maintain some Inuit employment, to ensure that the Inuit would have the ability to participate in economic developments in their own regions, and thus protect their future. In general, it is expected that costs should even

22. Nanisivik Mines Ltd., 'Northern Resident Report', internal NML report, July 31, 1981.
23. Private communications with consultants, government officials, and personnel staff in mining and in petroleum exploration.

out in the long term, as lower turnover among a core of experienced northern workers begins to compensate for the costs of recruitment of high-turnover southern workers. However, Nanisivik is not a long-term project, and may not reach this stage.

The basic rotation schedule for Nanisivik employees is 13 weeks on the job and two weeks of vacation with pay and return transportation to the point of hire. Northern residents are given an additional 2 weeks leave at the mid-point of the 13-week work schedule. This schedule has been called unattractive by a number of northern residents who do not work at Nanisivik and who told the researchers that they preferred the two-week-on and two-week-off schedule offered by oil companies. Although it may be a disadvantage at the recruiting and early retention stage, however, Nanisivik's schedule seems to agree with those northern workers who have stayed with the mine for at least a year. Most of the Inuit workers at Nanisivik (over 75 percent in 1981) do not take advantage of their time off after six weeks, but prefer to work 13 or even 26 weeks and take an extensive holiday during the spring or summer hunting season.

Economic Spinoffs for Northerners

One of the hopes with resource development is that it will stimulate economic linkages. That is, that there will be secondary and tertiary economic activity arising from the direct purchases by the mining company and the spending of wages. The GNWT evidently hopes to help stimulate small businesses by placing economic development officers in most communities.

Obviously, there are constraints in the Nanisivik area. Management skills are not yet widely distributed among Inuit. By comparison, the Keewatin has a longer history of development and of opportunity for Inuit entrepreneurs than does the north Baffin. Even in the Keewatin, however, Inuit businesses often run into trouble through administrative weakness (as do many southern businesses). Nevertheless, it must be recognized that business experience and training are important in integrating the Inuit to the Canadian economy. Indeed, it may have more long-term benefits than wage employment. For one thing, entrepreneurial capability is adaptable. It is applicable in a variety of circumstances. When a mine or development shuts down, some specialized workers who had been employed by the mine may find it difficult to locate similar work. However, the person who has successfully run a retail business may be able to continue it or to transport his expertise elsewhere.

The decision to create a dedicated townsite has probably reduced the economic spinoff opportunities for other communities in the region. NML itself has done

little to counteract this effect. The minesite community tends to be self-contained, with much of the expediting and maintenance done by company employees. In addition, certain employee benefits such as freight allowances and free transportation south for vacations are important recruiting incentives but reduce the amount of income spent in the north. Probably the major beneficiaries are airlines and air charter companies.

Some observers feel that Nanisivik Mines Limited has not done enough to encourage economic spinoffs and stimulate local businesses. Examples which have been cited include: a refusal to promise to patronize a local hotel, a refusal to engage in a labour contract with the Inuit Development Corporation[24] and damage to local retailers through the NML freight subsidy to employees.

Our observations cannot be taken in a quantitative sense. However, we were able to learn that the company does purchase the following goods and services locally:

- taxi services from Arctic Bay;
- some plumbing services from Kayak Mechanical in Arctic Bay;
- garbage collection in Nanisivik (the contractor is also an employee).

Indirectly, the economic stimulus provided by the mine has resulted in several other spinoff services and amenities provided to other agencies or to the population generally:

- janitorial services in GNWT government buildings at Nanisivik;
- the Nanisivik airport is operated by MOT, and supplies services to all residents and local businesses;
- the existence and maintenance of local roads is a direct result of the existence of the mine;
- fuel delivery in Arctic Bay is subcontracted from the GNWT by a local businessman. NML delivers all the fuel in the Nanisivik townsite.

Nanisivik is a very small mining operation, with only 200 employees, and a maximum life of 15 years. Although it has made contributions to regional economic development, they will be short lived. A few local entrepreneurs will do very well for a time. If they can transform their capital into something portable and/or lasting, one or two prosperous families may result. It would be a mistake to hope for much more from a small development like Nanisivik. At the same

24. The Inuit Development Corporation (IDC) is the organization established by the Inuit Tapirisat of Canada to invest and manage any funds that may be received by ITC as a result of land claims agreements. It has its own board of directors, president, and staff.

time, however, almost 400 northerners have passed through Nanisivik as employees during the operations to date, and have acquired some skills and familiarity with mineral developments that can be taken to other projects if they wish.

Environmental Issues

These mainly concern runoff from mine tailings, and the disposal of domestic sewage in Strathcona Sound. The immediate area is not important for hunting or trapping, but sea mammals are hunted around the mouth of the sound.

With respect to tailings, the original plan of the consultants was to dispose of tailings in deep water in Strathcona Sound. The government at first insisted on disposal on land. In the end, it was decided that the least harmful option was to dispose of tailings in one of the local lakes. That is the system in use at present.

Informed opinion now seems to be that it would have been better to use the deep sea option after all. Fisheries officials have noted a high level of heavy metals in the decant water from the tailings pond which eventually finds its way to the surface waters of the sound. There is also an elevated metals content in the bodies of sea creatures in Strathcona Sound and adjacent waters. However, it would be a mistake to link these two facts as cause and effect. The reason this link would be fallacious is that all surface waters in the area have a high metal content, due to the high concentration of iron and other sulphides in the rocks nearby. It is not clear, therefore, that the mine is contributing significantly to the metal content of the environment. Are metals contained in sea mammals harmful? Fisheries officials appear to believe that they are not necessarily harmful, because for generations the local people have been eating seals and other mammals with naturally high metal content.

We have a few direct observations on the tailings. We can vouch for the fact that the tailings area has a slight odour, but that the decant water is clear and virtually tasteless. Moreover, the Inuit employees, who are presumably aware of the method of disposal of tailings, are perfectly content to eat seals which are shot within a short distance of the discharge point. We suspect that this environmental issue of itself is probably not significant. What is significant is the obvious lack of baseline and monitoring information upon which to base judgments.

The sewage problem is interesting, but has not been studied or even widely discussed outside of Nanisivik. The municipal sewage from Nanisivik is nominally treated in a two-stage sewage treatment plant that was designed and built as

part of the overall development by the mining company. For a number of years, the sewage treatment facilities were operated by the company. They have recently been taken over by the GNWT. When the plant was the responsibility of the mine, its operation was monitored closely, and the company was forced to keep the plant running effectively in spite of considerable technical difficulties. Now that GNWT is operating the facility, inspections have virtually ceased. Furthermore, the plant is virtually ineffective. The first stage of sewage treatment is still being carried out (physical settling). However, the second stage (aeration and digestion) is bypassed. As a result, the BOD_{25} loading of material passing into Strathcona Sound is much higher than it was previously. Moreover, some new equipment that the company was required to purchase is on site but has never been installed. It appears that the government is more strict with private corporations than it is with itself.

Nanisivik as a Pilot Project

In a speech heralding the signing of the Strathcona Agreement, Jean Cretien described the project as a 'pilot Arctic mining venture involving many new concepts', that he hoped would be 'a model for future mineral developments in the Arctic'.[26] It was expected to fulfill many objectives, including:

- demonstrating Canadian sovereignty over territory in the high Arctic;
- improving the economy of the north:
- providing employment, training, and spinoff opportunities for northerners;
- experimenting with technical advances in northern housing and northern mining;
- developing Canadian icebreaking and merchant vessel capability.

It was thought that the project might point the way to the future, with increasing government-industry cooperation in ventures requiring very high infrastructure expenditures, as is the case with most resource developments in remote areas. However, from the beginning, the government's role received criticism from both within and outside government. It has been pointed out that Nanisivik is a small deposit, with a short lifetime and a marginal financial position. Government pilot projects are expected to experiment, break new ground, and be carefully studied; Nanisivik, however, has neither the cash flow behind it nor vast revenues accruing to it to support experiments in communication, training, and northern living and technology that the oil and gas companies, for example, have been able to conduct. Furthermore, the decision to

25. biochemical oxygen demand
26. Hon. Jean Chrétien, Minister of DIAND, 'Speech Notes', for the signing of the Nanisivik Mines Agreement, Frobisher Bay, 18 June 1974.

extend the mine life to prolong the social benefits made the financial position even more precarious. It was totally contrary to good business practice, which dictates that the ore should be recovered as quickly as possible in order to escape the burden of interest costs. The shortage of funds has also hampered the company's ability to do the environmental studies called for in the agreement and to monitor its overall impact on the region, although three major studies have been commissioned, two by federal agencies and one jointly by NML, the GNWT, and the federal government.[27]

The level of production and scale of activities offered relatively few spinoff benefits for southern Canada in terms of purchases of equipment and supplies, and shipping contracts. The concentrate is refined and marketed by the European partners. The infrastructure costs rose to unexpected levels, and exploration efforts failed to extend the expected lifetime of the project. However, by hindsight, it is beginning to appear that some of these criticisms are not justified in the long run. According to recent comments by government officials, there seems to be a growing acceptance of the view that many of the government's expectations for Nanisivik were too high. In retrospect, and in comparison with other projects, Nanisivik may have been both a useful learning experience and a successful pilot project.

The evaluation of the project by Hickling-Partners found that all the government's objectives were actually fairly well met, with the exception of employment, training, and economic spinoff opportunities for northerners.[28] Criticism of the project on these grounds may be irrelevant, however, if the original objectives were unrealistic. Furthermore, recent improvements in recruitment and in training programs have satisfied a number of former critics that real progress is being made.

The Use of Monitoring Committees

In every instance of mineral exploration and development in the NWT, the federal government has some leverage to exact terms and conditions from the proponents. For exploration, the major source is land use permits, drilling authorities, and drilling program approvals. Once production results, export licences have been a major source of leverage. In the case of Nanisivik, infrastructure assistance added to the strength of the government's bargaining position. Very extensive terms and conditions were set out in the Master Agreement, and the Monitoring Committee and TEAC were established to see that the agreement was kept.

---

27. Robert Gibson, Strathcona Sound; Hickling-Partners, Evaluation; BRIA, Socio-Economic Impacts.
28. Hickling-Partners, Evaluation of the Nanisivik Project.

There seems to have been an initial expectation on the part of the federal government and the GNWT that these two committees would both monitor and ensure compliance. However, they had no sanctions beyond moral suasion, and were able to observe, comment, and request, but not to insist upon or police compliance. As noted above, the same issues were raised and raised again unresolved at every meeting.

This raises a number of questions regarding the effectiveness of agreements or letters of understanding as means of achieving the objectives of governments with respect to northern resource developments. Can the agreements be enforced? What role do the monitoring committees actually play? Who should be involved in the monitoring process? Should local and northern interests be represented, as well as those of the federal and territorial governments?

The Choice of Nanisivik for Government Equity Participation

Growing infrastructure commitments led the federal government to seek equity participation in the Nanisivik mine in order to protect its investment. There may also have been the expectation that representation on the Board of Directors of NML would enhance the government's ability to ensure compliance with the terms and conditions of the Master Agreement, and to meet any new objectives that might arise. However, its minority holding gave the government only two seats on the board, enough to obtain insider information and to make its wishes known, but not enough for control.

A second matter to be considered in relation to equity participation is the fact that Nanisivik Mines Limited was created as a private corporation. As a result, financial information on transfer payments between the holders of equity or other insiders, such as management fees paid to SMS, or payments for concentrate from the European partners, is not available to the general public. The mine manager himself knows nothing about the financial performance of the company. (The federal government does have access to some of this information through its representatives on the NML Board of Directors). In the absence of reliable financial data, almost any sort of conclusion reached by the public or by researchers can be justified with respect to the financial situation of the company and therefore to its capacity to meet its obligations under the Master Agreement. As a result, suspicion and speculation have arisen, a development which is counterproductive in the context of a publicly-funded venture.

4. LESSONS OF NANISIVIK FOR THE EASTERN ARCTIC STUDY

Community Participation in Planning and Regulation

Identification of Affected Communities

In the course of planning and operating the Nanisivik mine, various lists of communities affected by the development have been compiled by different agencies and officials. There seems to be little systematic attempt to define the sorts of impacts that are implied by inclusion in these lists, or to explain how the communities are selected for inclusion. Different impacts require different kinds of community involvement, and it therefore seems reasonable to begin such a selection process by identifying the kind of impact to which the list applies.

For any development, the kinds of impact on communities might include the following:

i social impact;
ii environmental impact;
iii economic impact.

Each of these categories could then be used to select a list of communities that should participate in planning for or regulating these areas.

Social impacts on communities consist of the effects of such things as the influx of new population, new services and facilities that the community would share, increased contact with outsiders, or increased accessibility of southern goods including alcohol and drugs. Environmental impacts involve changes to water, land, air, and wildlife in the area in which the community members live, hunt, trap, or fish. Economic impacts include employment and training opportunities, spinoff businesses to serve the new development or the people it attracts to the area, and an increase of cash in the community.

The resulting lists could then be used to establish various bodies for community participation. In the case of Nanisivik, for example, it seems that only Arctic Bay might be interested in the social and environmental issues. Employment and training opportunities would interest a fairly large number of communities in the Baffin region and perhaps beyond it, while economic spinoff could be capitalized upon by a smaller group.

Identifying the Role of the Community

Once the affected communities for a particular development project have been identified, either formal or ad hoc bodies should be set up as agencies for participation. It is then the responsibility of all parties concerned, particularly the government department whose jurisdiction is primarily involved, to define and make absolutely clear the role of each community. This was not done for the Nanisivik development.

Arctic Bay was visited repeatedly by representatives of the GNWT, and the developers, and occasionally by federal officials. These visits were routinely described as 'consultation'. The council had the impression that its opinions were being sought out and were forming input into the decision-making process, when in fact the principal purpose was to inform the community of plans and alternatives that were under consideration (or, in some cases, had already been decided upon) by the proponents and senior levels of government.

Participation of a community, in planning and regulatory process can involve the receipt of information, the provision of information, consultation, right through to a real say in the decision-making process. The community should understand the full extent and implications of its role at all times.

Planning and Regulation of Government Activities

Northern communities are particularly dependent on the federal and territorial government for the provision of local services. Unlike their southern counterparts, their options and alternatives are virtually nonexistent. At the same time, their control over the quality of these services is less than that of tax-based southern communities.

The determinants of the social and economic impacts of any mineral developments in the north will include government-controlled aspects such as residential facilities and services, utilities, transportation and communication links, education, health services, and access to alcohol. It may, therefore, be useful to consider means for increased community participation in the planning and regulation of these aspects of development.

Community Options for Resource Development

There are many different options for community involvement in and exposure to resource development. In some circumstances a community will have a choice

about the degree and nature of its involvement. The Nanisivik case gives us an opportunity to consider some of the advantages and disadvantages of three such options:

i controlled access between an established community and a new development;
ii the creation of totally new community, dedicated to a development project;
iii the choice between expanding an existing community and creating a new one nearby.

Although the three are interrelated in this case, any one could conceivably be an option for a future development.

Controlled Access to an Established Community

Access to Arctic Bay from Nanisivik is restricted by two factors. One is the condition of the road and relative scarcity of private automobiles. The other is the cooperation of the company.

Most of the Arctic Bay residents employed at Nanisivik have moved to the new townsite. This has advantages for the company, the workers, and Arctic Bay as well. It eliminates the commuting time (about 1 hour each way under good weather conditions) and eliminates the very real danger of missing a shift because of transportation problems. It also reduces the opportunity for daily transportation of drugs or alcohol or other undesirable southern influences to Arctic Bay. At the same time, fairly frequent visits are made and family ties are maintained, so a substantial portion of the wage income does return to Arctic Bay. Some economic spinoff benefits have accrued, and services required by the mine, such as an improved airport and scheduled flights south, are accessible to both Nanisivik and Arctic Bay.

The mine management also cooperates in limiting employee access to Arctic Bay. Small groups from Nanisivik are permitted to visit and shop on Friday evenings, and are provided with return transportation. Partly in response to the concerns of Arctic Bay, the company prohibits the sale of alcohol in Nanisivik. Other company cooperation includes occasional assistance provided at no cost, such as fire protection or equipment loans.

It appears that limited access may provide a number of benefits to a community, with a minimum of costs. The consensus seems to be that economic benefits have been significant, material welfare has been improved, and social welfare not materially damaged, by the proximity of the mine.

Creation of a New Townsite

The creation of a new town seems to have worked well in the case of Nanisivik. (This view may well change radically if the anticipated closure of the mine occurs within five or six years.) Both southern and northern workers seem fairly content to live there. Although there are some difficulties for southern workers arising from the extreme isolation, these are probably less severe than they would be in an older established community which might be less homogeneous and have fewer amenities. We saw no evidence of racism or destructive antagonisms between southerners or northerners. Moreover, given a choice, northern residents seem to prefer living in Nanisivik. The fifteen houses allocated to Inuit are full, and there is a waiting list.

For future developments, more attention should be paid to the expected lifetime of the project, when consideration is given to construction of a dedicated townsite.

The status of Nanisivik as a development area rather than an incorporated municipality has been a matter of controversy from time to time. Residents of Nanisivik have in the past asked the GNWT to give the community official municipal status so a local government could be established. At one point, Inuit residents prepared a petition to this effect, but no action was taken. Southern residents appear to be less concerned, largely because their presence in the north tends to be transitory. The short lifetime of the mine and therefore the uncertain economic future of the community have also been drawbacks to achieving municipal status. The GNWT is undoubtedly reluctant to take over the provision of services now provided by the company at this late stage in the proceedings.

Since there can be no formal community participation in local government without municipal status, it would appear that, if this model is followed in the future, municipal status should probably be a condition for any new townsite. It should be granted at the earliest possible stage of the development, since the transition from company town becomes more difficult over time.

Expanding an Existing Community

The decision not to expand Arctic Bay to accommodate the Nanisivik workforce was made outside Arctic Bay and was contrary to the wishes of some of its residents. It appears, however, particularly in comparison with other communities such as Rankin Inlet, Frobisher Bay, or Tuktoyaktuk, that Arctic Bay has reaped some significant benefits as a result. Because there has been no influx of southern workers, Arctic Bay has not been overwhelmed by outsiders, either so-

cially or politically. Nor has there been a building boom that has changed the character of the community or interfered with the planning and the balance of residential and other structures. There has been no overtaxing of utilities and services, and less damage to roads within the hamlet due to heavy traffic. A community facing the decision to expand or to stay relatively separate from a new development would do well to consider the experience of Arctic Bay, as well as that of communities which have chosen to expand or had expansion forced upon them.

Information Needs for Planning and Regulation

The planning and monitoring of the Nanisivik mine involved certain information deficiencies that should be avoided in future developments. The structures that are now evolving for evaluating new developments in the NWT should reflect the information needs of the decision-making process, and should give responsibility for information-gathering to the most appropriate sources.

In the case of Nanisivik, data deficiences hampered both the planning stage and the monitoring process. For example, the absence of reliable information on the labour-force potential of the north Baffin contributed to unrealistic expectations concerning employment of northerners. Evaluation of the effect of run-off into Strathcona Sound has been made difficult by the lack of baseline data on the natural level of heavy metal content in the sound and in its flora and fauna.

Scientific and technical baseline or preliminary information should in most cases be collected and analyzed by professionals who are not necessarily northern residents. Later studies of the actual effects of ongoing developments should, however, ensure input from northern residents and communities, as well as the insights of southern professionals. This will reduce the likelihood of unrealistic findings. For example, the recommendations of the BRIA socio-economic impact report have generated some controversy, both for their substance and because some do not seem to arise out of the background research. Among the recommendations and the associated criticisms are the following.

- Rotation schedule: a schedule of two weeks at work and one week of unpaid leave at home was recommended.

  This scheme has been identified by many of our contacts as a major selling point for oil companies and would be an advantage for recruiting. However, work experience at Nanisivik does not seem to suggest that it would have a great effect on retention.

ii Communications: the report recommends both a formal Community Advisory Board of all North Baffin communities, to meet every 6 months, and regular monthly meetings between the Arctic Bay Council and the Nanisivik mine management.

The latter suggestion is supported by Arctic Bay and has already been acted upon by management, but it seems unlikely that a North Baffin Community Advisory Board will be formed. There is no interest on the part of management, and appears to be very little interest in the communities.

iii Housing: the study recommends that additional housing should be built in Arctic Bay for Inuit mine workers and their families.

Having driven over the one-lane raised washboard road between Arctic Bay and Nanisivik under the best possible weather conditions, we find it difficult to believe that year-round commuting of the 18-mile distance would be pleasant. It would not even be feasible for an unacceptably high number of days when blowing snow and darkness reduce visibility to zero.

iv Country food: the report recommends exploring the feasibility of providing country food in the Nanisivik dining hall.

This idea was rejected by everyone we asked about it in Nanisivik. The Inuit prefer to cook traditional foods themselves, and frequently do. Single Inuit workers are routinely invited to share country food with their married friends. A Nanisivik chef pointed out the health problems of serving food that is not government inspected. In addition, char and caribou have been offered in the company dining room and were not popular, even with the Inuit.

A further information problem that became clear in the course of the Nanisivik study arises from attempts at cross-cultural communication. There is a tendency on the part of southern officials of both industry and government to make flying visits to northern communities, present information packages designed for southern audiences, and depart, assuming that the message has been received. In many cases, however, community officials speak little or no English and have spent little or no time receiving education in a classroom setting. Their learning processes are not geared to English or to a lecture format, and they cannot read written presentations. We have been advised by both consultants and northern officials that information must be provided in Inuktitut, that concrete and relevant examples of abstract concepts must be given, and new concepts must be explained a number of times.

Employment and Training of Northerners

Nanisivik raises serious questions concerning the appropriate division of responsibility for both the educational system and the subsequent training of skilled labour in the north. The apprenticeship program in the north operates under much different conditions than in more densely populated southern regions. Among the problems that were identified are the following:

- the educational system is widely criticized for providing inadequate preparation for employment;
- very few communities offer schooling beyond grade 10;
- schooling for grades 11 and 12 requires leaving home for most northerners, and living in communities with particularly severe alcohol and social problems;
- classroom training within the apprenticeship program requires travel to Fort Smith, or to communities in Alberta, which are both distant and alien to Inuit from coastal communities;
- Inuit trainees would profit from as-yet-undeveloped teaching techiques that would take advantage of their visual and perceptual skills, rather than traditional classroom techniques;
- trainers and supervisors need cross-cultural counselling to help them to understand and deal more effectively with their Inuit co-workers.

Responsibility for dealing with some of these problems has fallen upon the Nanisivik management. They provide upgrading training, and have translated training manuals into Inuktitut. Other problems, such as the cross-cultural training and specialized training techniques, have not yet been tackled. Some observers, including GNWT education officials, feel that the special circumstances in the north may justify increased government involvement in on-the-job training programs.

Pre-employment training is unquestionably a government responsibility. However, because of the special circumstances of isolation and cultural differences, the community role in determining both the philosophy and the content of education may need to be greater than it is in southern communities. For example, in the Keewatin, local education societies have called for less emphasis on traditional Inuit subjects and more emphasis on employment-related skills. By contrast, this is not a concern in North Baffin, where traditional subjects are felt to be essential.

Direct Government Participation

The direct equity participation by the federal government in the Nanisivik mine was heralded as a unique arrangement that perhaps pointed the way to the future for northern development requiring large infrastructure components. There has been some disillusionment on the part of some federal officials with the failure of this particular project to live up to all their expectations. However, the National Energy Policy and the activities of PetroCanada make it clear that the government intends to continue in this direction, both as sole operator and as joint venture partner in northern energy developments.

The Nanisivik experience suggests that, in future, governments would be wise to participate only in public companies, where financial statements are freely available. It also suggests that governments should avoid projects which are so marginal that they cannot support the environmental and socio-economic studies which are required as a basis for public evaluation of the impacts of the operations. Governments should also set an example by ensuring participation of northerners in the planning and regulating of developments in which they are involved.

There is an important lesson to be learned from the government's equity role at Nanisivik for native groups such as ITC and development corporations that may be considering equity as means of sharing both revenues from and control of resource developments. It is essential to separate the role of the shareholder, whose goal is to receive a share of profits, and the role of management, which can establish policy. The first role can be realized through minority ownership, assuming there is a profit to be shared. The second, however, arises only from majority ownership, which carries with it the responsibility for management. Any groups seeking effective control of resource developments through ownership, therefore, should seek a majority share. Anything less may offer the hope of profits and cooperation, but will guarantee nothing more than insider information.

5. CONCLUSION: NANISIVIK IN THE EAS CONTEXT

The purpose of the Eastern Arctic Study is to project possible local government structures, and the corresponding processes of control, as well as regulatory frameworks which may apply to the resouce industries. For example, will mineral resource policy continue to be centralized, or will certain policies be devolved to territorial or regional or local bodies? A number of possible scenarios can be modelled. However, whatever powers may in future be possessed by northerners, the way in which they use these powers will be conditioned by their perceptions of their past experiences and by their expectations. The experiences and expectations of local northern residents, as well as those of northern bureaucrats, will be important. We must ask ourselves the questions: 'What do they want?' 'What do they want to achieve by resource development?' 'What difficulties have been experienced in the past that could be avoided by new rules?'

Our case studies are intended to gather existing perceptions about actual developments (such as Nanisivik) and to evaluate options for the future. Future concepts and expectations can scarcely be discussed in a vacuum. For this reason we have selected Nanisivik and the other case studies and have explored issues that have arisen in those particular cases, projecting them to the future where possible.

In the early stages of the Nanisivik development, the perceptions of the interested parties varied widely. Arctic Bay was not opposed to the project in itself but feared that social and economic damage would result. The GNWT seemed to see the project primarily as an opportunity to build a planned northern community. The federal government's hopes centered on economic and employment opportunities for northerners. The company hoped to make a profit.

All of these perceptions and expectations have altered somewhat over the course of the development. Arctic Bay's fears of social disruption were not realized, and it has been able to gain economic advantages, such as training and entrepreneurial experience, that will not be entirely lost with closure. The model townsite has its disadvantages, which will become more evident at closure. Chief among these may be the fact that the location is not suitable for the traditional pursuits of northerners, because it is too far from the water. The federal government is disappointed in the level of Inuit employment that has been achieved. However, there are indications that officials now realize that the initial expectations were too high, and that, in comparison with Polaris for example, Nanisivik may actually prove to be a relative success. As for the project itself, it remains to be seen whether or not the original investment would have earned more sitting in a bank account.

The fact that both the worst fears and the highest hopes for Nanisivik have failed to materialize cannot be attributed solely to a planning process or lack thereof. However, study of these fears and hopes, and of the actual course of events, can serve as a guide in planning future structures and processes for government and regulation of industrial development in the Northwest Territories.

APPENDIX I

CHRONOLOGY OF NANISIVIK DEVELOPMENT

1957

- Texas Gulf Sulphur Co. (TGS) began staking claims.

1958

- Field programs by TGS began, and continued for 12 years. Inuit employed by TGS program.

1968

- North Baffin area economic study conducted by DIAND.

1969

- Bulk sampling program by Texas Gulf.

- Voyage of the Manhattan raised sovereignty concerns.

- Employment of Inuit.

1970

- Preliminary engineering and economic studies by TGS.

- TGS began discussions with DIAND on export permits and project development.

1971/72

- TGS commissioned a feasibility study by Watts, Griffis and McOuat, G.Farquharson and J.E. Marshall did the study.

1972

- TGS still not able to resolve its differences with DIAND concerning export permits and job opportunities for northerners.

- TGS entertained development proposals from other firms.

1972 (Continued)

- Developers met with Arctic Bay Council every 6 months or so until 1976, when production began.

- March. Jean Chretien, Minister of DIAND, announced the government's new and environmental protection were given top priority, policy for northern development in Canada's North 1970-1980. Quality of life and environmental protection were given top priority, and nonrenewable resource development was last on the list of priorities.

- August. TGS agreement with Mineral Resources International (MRI). Property assigned to MRI in exchange for MRI's Mexican sulphur reserves. TGS to receive 35% of net profits after recovery of development costs. TGS supplies $300,000 towards feasibility study.

- August. Feasibility study begun by Watts, Griffis and McOuat (WG&M) for MRI. Consultants discussed government requirements and possible assistance with feds and NWT officials. Farquharson is WG&M chief consultant.

- Late August. Site visit by consultants and advisors. Brief visit by Farquharson and others to Arctic Bay. Discussed plans, employment prospects,
- and council's ideas on townsites.

- September. Baffin regional administrator recommends study of social impacts on Arctic Bay.

- October. Assistant commissioner approves social impact study, but GNWT executive does not approve. Study never done.

- Arctic Bay, and particularly councillor Kenn Harper, objected to townsite at Nanisivik - feared depletion of Arctic Bay.

- November. Settlement secretary of Arctic Bay wrote consultants saying they had not been consulted but had something to say.
  a) bunkhouse facilities recommended at site. Mining town should not be built;
  b) families should live in Arctic Bay;
  c) infrastructure items (road, etc.) necessary for (b) should be provided.

- December. Farquharson wrote to Arctic Bay. Conciliatory letter, but contains no comment on community's requests.

1972 (Continued)

- December. John Parker, deputy commissioner, wrote Arctic Bay, suggesting that people moving in from other communities would prefer to have their families at the minesite. Neither Parker nor Farquharson indicated that the decision for a new townsite had been made.

- December. Baffin Regional Administrator urges Council of Arctic Bay to consider potential impacts. Issues of concern: road would increase impact; alcohol at Nanisivik; policing.

1973

- February 27. Communication from WG&M (Farquharson) to DIAND (Chrétien) stating company could operate mine as a single status community with worker rotation. However, if 'full community' is desired (which would provide more opportunity for northern employment and economic spinoffs), then government assistance would be required.

- February and August. Consultants visited site and reviewed townsite possibilities with people of Arctic Bay.

- Consultants had extensive contact with DIAND. Less, but some, with GNWT, MOT, CMHC, NCPC, NWT Water Board, GSC, DOE.

- Meeting of MRI and WG&M with Minister of DIAND and officials:
  - reduced production rate - mine life extended from 8 to 15 years to justify government infrastructure contribution and maximize native training and employment
  - accommodation changed from bunkhouse/rotation to permanent townsite.

- February. MRI officials in Arctic Bay; little information provided in advance. Inuit said they were generally in favour of mine. Some concern about certain aspects, but assumed benefits would outweigh problems. Statement by Farquharson apparently led to rift between Arctic Bay and Inuit Tapirisat of Canada.

- February. Arctic Bay Council wrote to Tagak Curley, ITC president, telling ITC to keep out except when requested.

- July. Brought in supplies for 1974 development season.

- August. Site visit by Canadian, Dutch, German, and Japanese smelting companies with MRI and DIAND. Also paid visit to Arctic Bay.

1973 (Continued)

- August. Company visit to Arctic Bay. Presented information on proposed townsite to community. Settlement Council was asked to state its preference on the timing of road construction. No alternative broad plans presented.

- August 1973 to March 1974. DIAND studies feasibility and evaluates participation and support. GNWT, EMR, MOT, Treasury Board, Finance, Manpower, DOE, DREE all participated. EMR very skeptical, DIAND supportive.

- September. Consultants' final feasibility report was submitted to MRI. Copy sent promptly to DIAND but only a summary sent to Arctic Bay.

- October to January 1974. Negotiations between MRI and European smelting companies (Metallgesellschaft and Billiton) resulted in concentrate agreements, and the addition of the two European companies as partners.

- October (?). MRI entered into a contract with newly-formed Strathcona Mineral Services Ltd. (SMS) for construction, engineering, and project management services. Farguharson and Marshall had moved from WG&M to SMS.

- October. Speech by Jean Chrétien - favourably disposed to northern mineral development. Would offer cooperation.

- November. GNWT Executive approves Nanisivik townsite in principle. (1)

1974

- January 17. Nanisivik Mines Ltd. (NML) was incorporated with initial capitalization from private sources of $60 million.

- January 25 (?). Strathcona Mineral Services (SMS) was incorporated. President G. Farquharson, Vice-President J. E. Marshall.

- January & February. Visits of DIAND (Bissett) and GNWT officials to Hall Beach, Igloolik, Pond Inlet, Clyde River, and Arctic Bay to collect labour information. Apparently first visits to affected communities. Little advance information sent about the project.

- March 1. Release of initial draft of Bissett report on labour availability in North Baffin.

- March 8. DIAND memo to cabinet recommending approval of Nanisivik.

1974 (Continued)

- March 15. As late as this, some DIAND officials questioned why Nanisivik should be supported and not Polaris, though the latter would be financially economic without government assistance, and would have a much longer life

- March. Meetings in Yellowknife between MRI and GNWT. Discussed employment cycle, social impact of mine on Arctic Bay, design of townsite and housing.

- March. Meeting of MRI with people of Arctic Bay. Progress report, slide show. Major design decisions had already been made.

- March 28. Cabinet approves, in principle, $16.7 million in grants and loans. DIAND and Industry, Trade and Commerce to negotiate an agreement with MRI.

- April. Federal 'Strathcona Working Group' formed to negotiate agreement. No local people included.

- June 18. Agreement signed between DIAND and MRI. Agreement provided:
  - license to export concentrate
  - infrastructure grants and loans of $16.7 million
  - in return, 18% government equity interest in Nanisivik Mines Ltd.
  - by third year, target of 60% northern resident (Inuit) workers.

- November 25. Estimates of total public funds submitted to T.B. at $18.3 million, up from $16.7 million.

1975

- 1975-76. Periodic meetings held with representatives (not employees) from Arctic Bay, Pond Inlet, Grise Fiord, Frobisher, Igloolik and Clyde River.

- February. Arctic Bay received complete copy of September 1973 feasibility study.

- February 20. MRI assigned its responsibilities under the master agreement (with DIAND) to NML.

- March 8. Letter from Arctic Bay Council to GNWT commissioner, protesting:
  - lack of early consultation ('tokenism')
  - delay of information about new townsite
  - lack of attention to social impact
  - being duped into rejecting ITC help in 1973
  - receipt of feasibility study only in February 1975

1976

- Inuit workers disagreed with northern community representatives and told company they wanted family housing in Nanisivik.

- July. Arctic Bay upgraded from settlement to hamlet.

- Phase 2 of Nanisivik townsite - Inuit housing, married workers' quarters.

- September. Mill testing began.

- October. Mine went into production.

- December. Major fire destroyed some equipment.

1977

- Training and Employment Committee in operation - met every 6 months.

- The 15 Inuit houses available for occupancy.

- January. Mine went into full production.

- February 1. Mine commenced production under the Income Tax Act.

- April 1. Official start of mine production according to some sources.

- July. First concentrate shipped.

- October 13. Meeting between Northern Baffin Employment & Training officers and representatives of Arctic Bay - wanted certification for workers, business opportunities.

1978

- January 27. First meeting of Monitoring Committee.

- October. SMS's first recruitment tour of Northern Baffin communities.

1979

- NML prepared 'Action Plan' re employment-related issues.

- November. BRIA study completed.

1980

- February 9. Foundation problem in the concentrator caused shut-down until May 15.

- August. BRIA study released.

- Fall. Armstrong hired as training officer at NML. Improvement of program began.

- November. IDC inquired about possibility of recruiting for Nanisivik. Present at meeting - Witty, Marshall, F. Nowicki.

- November. Recruitment tour to Broughton Island, Clyde River, Hall Beach, Igloolik and Cape Dorset. Tom Demcheson (GNWT), 2 SMS personnel people, head of Canada Manpower in Frobisher, 2 Inuit employees. Only Broughton showed interest. Pond not visited.

1981

- Fall. NML successfully renegotiated concentrate contracts with European smelters to improve revenue prospects.

1982

- March. Position of NML training officer split off from personnel position, and new program involving definitions of standards and certification begun.

APPENDIX II

LIST OF ACRONYMS

BRC	Baffin Regional Council
BRIA	Baffin Regional Inuit Association
CMHC	Central Mortgage and Housing
DIAND	Department of Indiand Affairs and Northern Development
DOE	Department of the Environment
EAS	Eastern Arctic Study
EMR	Energy, Mines and Resources
FIRA	Foreign Investment Review Agency
GSC	Geological Survey of Canada
GNWT	Government of the Northwest Territories
IT&C	Industry, Trade & Commerce
IDC	Inuit Development Corporation
ITC	Inuit Tapirisat of Canada
M&I	Manpower and Immigration
MRI	Mineral Resources International
MOT	Ministry of Transport
NML	Nanisivik Mines Limited
NCPC	Northern Canada Power Commision
NWT	Northwest Territories
SMS	Strathcona Mineral Services
TGS	Texas Gulf Sulphur, later Texasgulf Inc.
WGM	Watts Griffis and McOuat, Consultants

APPENDIX III

NANISIVIK INTERVIEWS

ARMSTRONG, Rick, Personnel & Training Supervisor, NML, Nanisivik
ARNAUYUMAYAQ, Nuterajuk, Assistant Field Service Officer, GNWT, Arctic Bay
AWA, Simon, President, BRIA
BRITTON, Jim, Regional Director, Baffin Region GNWT, Frobisher Bay
BROWN, David, Manager, Arctic Operations, Federal Commerce and Navigation, Sealift
CAMPBELL, David, Manager, HTA, Arctic Bay
CLEVELAND, Mark, Supervisor, Adult Programs, GNWT
CSEREPY, Frank, Special Projects Officer, Department of Local Government, GNWT
CURLEY, Tagak, President, IDC
DEIRMENJIAN, Shahan, Planning Officer, Pond Inlet
DEMCHESON, Tom, Coordinator, Employment Division, Economic Development and Tourism, GNWT
DESJARLAIS, Joey, Mine Helper III, NML, Nanisivik
ETOOANGAT, Norman, Millwright Apprentice, NML, Nanisivik
FINNIS, Harry, Supervisor, Camp Services, NML, Nanisivik
FOSTER, Terry, Department of Economic Development and Tourism, GNWT
FREITAG, F., Captain, Federal Commerce vessel Arctic Tide, Sealift
GILDAY, Dave, Executive Assistant to Deputy Commissioner, GNWT
GOSHALUK, Howard, Department of Economic Development and Tourism, GNWT
JOHNSON, Denis, Administration Superintendent, SMS, Nanisivik
KANGO, Joshua, Heavy Equipment Operator, NML, Nanisivik
KATSAK, Rhoda, Assistant Secretary Manager, Pond Inlet
MACKINNON, Dan, Consultant, Ottawa
MARKLE, Jack, Supervisor, Surface Deptartment, NML, Nanisivik
MARSHALL, Jim, V-P and Nanisivik Mine Manager, SMS
MEYER, Klaus, Concentrator Superintendent, NML, Nanisivik
O'REILLY, J.P., Traffic Manager, Federal Commerce and Navigation, Sealift
PATTERSON, Jack, B.C. and Yukon Chamber of Mines
PEARCE, Frank, Secretary-Manager, Hamlet of Arctic Bay
RUSTIG, Wolf, Mine Manager, SMS, Nanisivik
SHAPPA, Kik, Manager, Arctic Bay Housing Association, Arctic Bay
SIMARD, Roger, DIAND (Special Projects)
STERLING, Robert, Chief, Employment & Socio-Economic Planning Division, DIAND, Ottawa
TODD, John, President, Siniktarvik Corporation, Rankin Inlet
TRUDEAU, Robert, Superintendent of Economic Development, BAFFIN REGION, GNWT
WORRAL, Don, Department of Economic Development & Tourism, GNWT, Frobisher Bay
WRAY, Gordon, General Manager, Sigyamiut Ltd., Baker Lake
YATES, A.B., Deputy Administrator, Northern Pipeline Agency, Calgary

APPENDIX IV

BIBLIOGRAPHY

Agar, C.F., Nanisivik - An Arctic Mining Adventure. Presented to the CIM meeting in Ottawa, April 17-20, 1977. n.p., n.d., 10 pages.

Baffin Region Inuit Association, Socio-Economic Impacts of the Nanisivik Mine on North Baffin Region Communities. Report prepared by Charles Hobart for Nanisivik Mines Ltd., the Government of the Northwest Territories and the Government of Canada, (November 1979), 428 pages.

Canada, Dept. of Indian Affairs & Northern Development, North of 60: A Summary of Possible Environmental Effects of Disposing Mine Tailings into Strathcona Sound, Baffin Island. Prepared by Hatfield Consulting Ltd. (Ottawa, 1976), 76 pages.

Canada, Dept. of Indian Affairs & Northern Development, Socio-Economic Impacts of the Nanisivik Mine on North Baffin Region Communities: Executive Summary. Report submitted by the Baffin Region Inuit Association. (Ottawa, 1980), 37 pages.

Canada, Dept. of Indian Affairs & Northern Development, Strathcona Sound Project: Progress Report. (Ottawa, June 1980), 37 pages.

Canada, Office of the Privy Council, Order Respecting the Export of Lead and Zinc Concentrates from the Nanisivik Mine at Strathcona Sound on Baffin Island in the Northwest Territories. 19 November, 1974.

Canadian Arctic Resources Committee, 'Nanisivik', Northern Perspectives, Vol. 4, No. 2, 1976.

Fish, Richard, 'Nanisivik Mines Takes on the Challenges of the North', Canadian Mining Journal, September 1979.

Gibson, Robert R., The Strathcona Sound Mining Project - A Case Study of Decision Making. Science Council of Canada Background Study No. 42. (Ottawa, 1978), 274 pages.

Hickling-Partners Inc., Evaluation of the Nanisivik Project. Prepared for the Department of Indian Affairs and Northern Development. (May, 1981), 83 pages.

Memorandum of Understanding between Nanisivik Mines Ltd. and the Government of Canada, Dept. of Indian and Northern Affairs. 1980 Program Socio-Economic Matters, Nanisivik Mine Operation. March, 1980, 12 pages.

Mineral Resources International Limited, Annual Reports 1977, 1978 and 1980-81 (first quarter).

Minutes of the Hamlet Council of Arctic Bay.

Minutes of the Hamlet Council of Pond Inlet.

Nanisivik Employment and Training. Collection of documents regarding training and employment at Nanisivik.

Nanisivik Monitoring Committee. Collection of documents regarding the Nanisivik Monitoring Committee.

Nanisivik Townsite Project. Collection of documents regarding the Nanisivik Townsite Project.

Nanisivik Mines Limited, 'Northern Resident Report as of July 31, 1981', internal NML report.

Nanisivik Mines Limited, 'Nanisivik Project', internal NML report.

Nanisivik Mines Limited, 'Personnel Status Summary', internal NML report, July 1981.

Northwest Territories Water Board, Public Hearing. Nanisivik Mines Limited, Arctic Bay, NWT, April 22, 1976. Transcript of the hearing. 28 pages.

Strathcona Mineral Services limited, Comments on Principal Recommendations on BRIA Socio-Economic Impact Study of Nanisivik. (Toronto, January 9, 1981), 9 pages.

Watts Griffis and McOuat Limited, Excerpts from the Feasibility Study of the Strathcona Sound Project for Mineral Resources International Limited.

Yates, A.B., 'Nanisivik - The Place where Things are Found - an Exmple of Government-Industry Cooperation in the Far North'. CIM Bulletin, October 1975, pages 71-78.

THE AUTHOR

Margot Wojciechowski has a B.A. in Political Science and Economics from the University of Toronto (1958) and an M.A. in Political Studies from Queen's University (1970). Her professional experience includes three years as an economist with the Dominion Bureau of Statistics, and several research positions in the field of public administration. She is now assistant director of the Centre for Resource Studies at Kingston.

THE CENTRE FOR RESOURCE STUDIES

The Centre was established in 1973, under the sponsorship of Queen's University, the federal Department of Energy, Mines and Resources, and The Mining Association of Canada, to carry out a program of research and publication on mineral policy issues. Mineral resources considered by the Centre include metallic, industrial and non-metallic, and structural minerals, but exclude petroleum and natural gas.

The Centre provides opportunities for multidisciplinary research in resource studies at Canadian universities, furnishes reliable information on matters related to mineral resource policy, and promotes closer liaison between government, industry and other concerned groups. The Centre's publications employ non-technical language, so far as the subject allows, to enhance their value to non-specialists. The main research program is carried out both at the Centre and by means of contracts with qualified investigators, usually at Canadian universities, while small exploratory studies are funded through a system of grants-in-aid of research. CRS Policy Discussion Seminars involve representatives from governments, industry, universities, labour, and other interested groups in constructive working sessions on issues of current concern. Seminars are held three or four times each year. Through these programs, and the resulting publications, the Centre hopes to contribute to informed discussion of the issues.

The Centre is governed by a board of directors which decides general policy and establishes priorities for research. The Chairman is Mr. R.J. Hand; there are fourteen other members - seven nominated by Queen's University, four by The Mining Association of Canada, and three by the federal government. Guidance on the research program, together with discussion of policy issues and other matters, is provided by the Advisory Council. This body comprises all researchers associated with the Centre, together with members appointed from such groups as governments, industry, labour, and consumers. Committees of specialists aid in the development of projects and the selection of research proposals, and advise on the progress of the research. The executive director and staff are responsible for the work of the Centre within this framework.

The Centre welcomes comments on its publications, proposals for research projects or for publication, or enquiries about any aspect of its work.

Centre for Resource Studies
Queen's University
Kingston, Ontario, Canada K7L 3N6
(613) 547-5957

THE INSTITUTE OF LOCAL GOVERNMENT

The Institute of Local Government, Queen's University, was founded in 1944 to provide a focus for educational and research activities related to municipal government in Canada. It is part of the School of Graduate Studies and Research at Queen's University. Katherine A. Graham is Director of the Institute.

Within this broad mandate, the Institute has devoted itself to the continuing education of municipal officials, to the provision of advice to municipal officials and others dealing with various problems related to urbanization, local government politics, organization and management. Its research program has spanned eight broad areas of interest:

- studies of municipal institutions;
- the municipal political process;
- management in local government;
- local government in remote and rural areas;
- comparative local government;
- local government in the intergovernmental arena;
- the history of local government;
- urbanization and its effects.

The Institute welcomes comments on its publications, proposals for research projects, or enquiries about any aspect of its work.

Institute of Local Government
Queen's University
Kingston, Ontario K7L 3N6
(613) 547-5957

EASTERN ARCTIC STUDY

The Centre for Resource Studies and the Institute of Local Government, both of Queen's University in Kingston, Ontario, are undertaking a study of the ways in which the land claim of the Inuit Tapirisat of Canada (ITC) may affect local government and mineral development in the Northwest Territories (NWT). Financial support for the study is being provided by an independent agency, the Donner Canadian Foundation. Advisory support is being provided by the ITC, the the federal government, the Government of the Northwest Territories, and many other agencies, companies and interested groups.

The objectives of the Eastern Arctic Study include the following:

1. to study the potential impact of the settlement of ITC land claims, and of constitutional development in the NWT, on local government in the ITC area;

2. to study the potential impact of these changes on mineral development (including both petroleum and mining) in the ITC claim area.

3. to present the results of this research in a manner which will permit its use by northerners and other interested parties to anticipate possible difficulties and mitigate their effects.

Local government is extremely important to the residents of the Northwest Territories, because local councils and committees provide services that are basic to everyday needs. In addition, a community's local government can often act as the interpreter and advocate of peoples' interests and needs.

We expect the land claim negotiations to result in two related outcomes.

i Local governments will be given increased responsibilities in the land claim area. Some changes are already in progress, chiefly through the initiative of the communities themselves and of the Government of the Northwest Territories. ITC also supports stong local government. The phrase 'local government' refers to any governing authority established below the territorial level. It could include, for example, regional governments as well as hamlet or settlement councils and their committees.

ii There will be a significant increase in the degree of influence exerted by local governments, and by native institutions such as development corporations and cooperatives, on resource planning and the mineral development process.

Thus we expect the settlement of claims to affect significantly the climate for mineral development in the NWT. Native people will have strengthened local governments and an expanded role in planning the nature and direction of resource development.

The possibilities for mineral development in the ITC claim area are substantial, and the future of resource development in this region has implications for the welfare of all northerners, and for all Canada. It is therefore important that all parties to the negotiating process understand the possible consequences of their decisions and actions. The purpose of this study is to contribute to that understanding.

For further information contact:

M.J. Wojciechowski (Mrs.)
Centre for Resource Studies
Queen's University
Kingston, Ontario
K7L 3N6
(613-547-5957)

K.A. Graham (Mrs.)
Institute of Local Government
Queen's University
Kingston, Ontario
K7L 3N6
(613-547-2618)

EASTERN ARCTIC STUDY PUBLICATIONS

The following publications are currently available from the Eastern Arctic Study:

The Inuit Land Claim, Constitutional Development, and Local Government Reform in the Northwest Territories: An Overview, by Katherine A. Graham and Anne B. McAllister, 50 pages, published 1981.

Industrial Development in the Eastern Arctic Study Area: A Preliminary Overview, by C. George Miller, 31 pages, published 1981.

Eastern Arctic Study Bibliography Listings, as of June 1, 1981, by M.P. Sharon Brown, 70 pages, published 1981.

Eastern Arctic Study Case Study Series: The Alaska Native Claims Settlement, by David Baker, 100 pages, published 1982.

Eastern Arctic Study Case Study Series: Mineral Exploration in the Baker Lake Area, by Anne B. McAllister, 58 pages, published 1982.

Eastern Arctic Study Case Study Series: The Development of the Polaris Mine, by Katherine A. Graham, 61 pages, published 1982.

Eastern Arctic Study Case Study Series: The Nanisivik Mine, by Margot J. Wojciechowski, 62 pages, published 1982.

POOR

QUALITY

ORIGINAL